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B R I S T O L
AND ITS ENVIRONS

Historical Descriptive & Scientific

PUBLISHED UNDER THE SANCTION
OF THE LOCAL EXECUTIVE COMMITTEE OF THE
BRITISH ASSOCIATION

WITH ILLUSTRATIONS AND MAPS

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Introduction.

THE immediate reason for the existence of the present book is the visit of the British Association to Bristol, though there is no doubt that its usefulness will much outlast the week of that event. There has always been the want of a sufficient account of the social economy and natural history of the district, which want, it is thought, has been here met in a manner that will be of permanent service.

The work has extended much beyond the limits originally designed, but it is hoped that its value, especially to the stranger or scientific reader, has commensurately increased. It will be seen by the table of contents that there have been many contributors to the book. Indeed, there is here collected a body of scientific observations and results that in its several divisions has demanded the assistance of those whose studies have been directed to its special subjects. There can be no doubt

that in this way there has been obtained a thoroughness of treatment, so far as consistent with space, that no single writer would have been able to produce from his own acquirements and researches.

It should be added that the contributions are honorary, that the several authors have written with pure love of their subject and for the sake of doing homage to the occasion that has called forth the volume.





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BRISTOL AND ITS ENVIRONS.

Historical Sketch.

SECTION I.

BRISTOL, more truly *Bright Stow*, that is, illustrious or bright dwelling, answers its name," says old Fuller, "in many respects. Bright in the situation thereof, conspicuous on the rising of the hill; bright in the buildings, fair and firm; bright in the streets, so cleanly kept, as if scoured (where no carts, but sledges are used), but chiefly bright for the inhabitants thereof, having bred so many eminent persons." Fuller's guess at the etymology of Bristol is hardly serious, but may be as reasonably accepted as some more earnest explanations. Mr. Seyer gives forty-two variations in the spelling of the name, and after showing attempted derivations from Brennus, the legendary founder of the city; Brictric, its Saxon lord, &c., finally decides for Brig-stow, or Bridge town, an etymology accepted by the Rev. Isaac Taylor in his "Words and

Places." The number of both wise and foolish explanations could yet be added to, and the question still remain open. We therefore prudently leave it as it stands.

The earthwork fortifications on the heights of the Avon at Clifton and Leigh, though antiquaries are not agreed upon their date (whether British, Roman, or Saxon), at least show traces of an early population in the immediate neighbourhood of Bristol, even if these defensive works were not designed to protect the approach to that town from the sea. With respect to the Roman occupation of the site of Bristol the materials of evidence are somewhat scanty. Though *Caer Brito*, one of the 28 Roman cities mentioned by Nennius in 620, was interpreted by Henry of Huntingdon (A.D. 1154) to mean Bristol, few tangible relics of Roman settlement have been discovered. Coins of several Roman Emperors have been dug up on Kingsdown, and on St. Michael's Hill; also in Bell Lane, Broad Street; and recently on the site of the new nave of the Cathedral. Likewise, a pig of lead, with a Roman inscription, was lately found in the bed of the Frome, Wade Street. Except for the testimony supplied by these facts, the argument for the Roman foundation of Bristol seems to be wanting in support, and it might be unwise, therefore, to strongly contend for so early an origin. The date, A.D. 1051, however, assigned by an eminent living historian as the earliest year Bristol is to be found in history, is later than existing data require for the beginning of the place. The numerous Bristol coins extant of Danish mintage are alone sufficient to indicate here a centre of population in the time of the Danes. Mr. Ruding, the

eminent numismatologist, states that there are four or five varieties of a penny of Canute. Harold I. and Hurthcnut, sons of Canute, likewise had mints at Bristol, as had also Edward the Confessor and Harold II. The type of the obverse of one of Harold the Second's Bristol coins was copied by William the Conqueror.

In speaking of the Danish invasion, Mr. Worsae remarks that in Southern England the repulsed Anglo-Saxons concentrated the remnants of their strength. "A great number of influential Danes were indeed also settled here, either in the country, or with a view to commerce, in the principal towns on the coast, such as Winchester, Exeter, and Bristol. But out of London the Danes scarcely formed at that time any really strong and united power in the South of England. The predominating people were the Anglo-Saxons, and in general the old Saxon characteristics had been preserved."

The earliest direct historical reference to Bristol we find in the "Gwentian Chronicle," of Caradoc of Llan-carvan (fl. c., A.D. 1156), whose annals are based upon Latin MSS. apparently of the 10th and 11th centuries.* This ancient historian states that Einion, son of Owain, son of Hywell the Good, came to Gowerland under pretence of pursuing the heathen Danes, and totally ravaged that district. Being opposed by Owain, son of Morgan, King of Glamorgan, he was put to flight, and the men of Gower were brought into fealty to the victor, as in former times. "And when Edgar, King

* Brut y Tywsogion. Edited for Cambrian Archaeological Association by Aneurin Owen VII. We are indebted to Mr. Thomas Kerslake for pointing out this early reference.

of the Saxons, heard that, he came with a fleet to Caerleon upon Usk, and caused Owain, son of Hywell the Good, to submit and swear fealty to him, and then returned in peace to *Bristol*.*

If the authority of Polydore Virgil (A.D. 1525) be accepted, Edmund Ironside, being proclaimed king by the citizens of London in A.D. 1016, advanced against the Danes settled in the west, and, assaulting Gloucester and Bristol, then held by that people, forced those who were left in garrison to come forth to handstrokes, slew many, and brought the rest to submission and to plight pledges of their faith.

The evidence derived from the ancient romance of "Merlin" will not perhaps be received as unimpeachable history, but the story in so early a poem (A.D. 1230) of the Danes landing at Bristol, shows some tradition of fact, or at least indicates the importance of the place at the time when the elements of the romance were being crystallized into their ultimate forms, if not when they were held in solution. The incident as therein related is to the effect that in Denmark were two stalwart Sarazens (Saxons) of King Hengist's kindred, one being the son of Hengist's brother, and the other of his sister. These heroes were respectively named Sir Gamor and Sir Malador. They were great lords in their own land, one holding two duchies and the other

* *ib.* 31. Edgar, who made kings his watermen, proudly declares in one of his charters that he had subdued all the islands of the ocean with their ferocious kings, even unto Norway, and the greatest part of Ireland, with its most noble city, Dublin. To invade Dublin he would probably have sailed from Bristol. No wars, however, are particularized to have been waged by Edgar, except an invasion of Wales.—"Turner's Anglo-Saxons," i., 398. Caradoc.

three. When they heard how Hengist was slain in England, they gathered a numerous host to avenge his destruction :—

Unto shipp they gone anon
& the seas to flow began,
the winde so well began to blow
that they landed at Bristowe.
then Merlin knew it well anon
and told it Uther and Pendragon
how there was comen from Denmarke
a strange oste stoute and starke
with many Sarazens of price
For to avenge King Anguis (Hengist)
In England sayd Merlin then
Such an oste was never seen.

A great battle was fought, in which more than 3000 Christian men were slain, and of the Saxons only five escaped alive.*

On the whole we may safely conclude that Bristol was a habitation and a name before A.D. 1051.

Bristol Castle is not mentioned in *Domes-day Book*, but appears first in history in connexion with Geoffry Mowbray, Bishop of Coutance. Like some feudal tower such as he himself might have erected, that has outlasted village and town, and still stands a conspicuous object in the landscape, the figure of this haughty baron-priest lifts his head in the historic page above the level of the invading host who came over with the Conqueror. He was nephew to Tancred, the chivalrous hero of Tasso's classic romance. We find him at Bristol in the year 1088, in company with Robert Mowbray the "Peace Breaker," his nephew, a huge,

* "Merlin." Bp. Percy's Folio MSS., Early Eng. Text Soc., vol. i., 496.

dark complexioned, harsh, proud, and melancholy man, who rarely smiled when speaking. These had combined with Odo, Bishop of Bayeux, against William Rufus, in favour of Robert, Earl of Normandy. The plot was concerted during Lent, and when Easter came they marched forth and plundered and burnt the lands of the crown, and harried the estates of those who stood loyal to the king. The *Anglo-Saxon Chronicle* proceeds to tell us that each of the head conspirators went to his own castle and provisioned it. Bishop Geoffry and Robert, his nephew, having spoiled Bristol, brought their booty into the castle. Afterwards they devastated the surrounding country, including Bath and Berkeley. We may agree with an old chronicler that Geoffry was more distinguished in the camp than in the church, and was better fitted to array mailed soldiers for battle than to teach cowed monks to chant psalms. The rebellion was unsuccessful, and the belligerent prelates were driven out of the kingdom. William Rufus, being now in peaceable possession of the kingdom, granted the royalty or Honour of Gloucester, including Bristol and its castle, to his cousin, Robert Fitzhamon, whose daughter and heiress, Mabel, marrying Robert, Earl of Gloucester, brought her splendid dower into the possession of that powerful baron, and thence to his descendants.

Robert, Earl of Gloucester, was the natural son of Henry I., and consequently half-brother to the Empress Matilda, who was daughter of the same king and Matilda, his wife. Stephen, Count of Boulogne, was the son of Adela, the king's sister, and the Count of Blois. His assumption of the throne was therefore in defiance of the prerogative of the lineal suc-

cessor. Robert having headed the cause of his sister, a series of engagements was fought, which, at the battle of Lincoln, resulted in the king falling into Gloucester's hands, who confined him in Bristol Castle. Matilda now assumed the sovereignty, her success hitherto having brought her the allegiance of all England except Kent. That county was the headquarters of Stephen's queen, who had not yet lost hope of retrieving her captive husband's affairs. Accordingly, at the head of a powerful body of soldiers, she besieged Matilda at Winchester, and forced her to fly thence, and take refuge, after a hard flight, in the castle of Devizes. Robert, Earl of Gloucester, was taken prisoner, and confined in Rochester Castle, but in no long time was released in exchange for King Stephen, who had been lingering in chains in the donjon keep of Bristol Castle. He then passed over to Normandy to endeavour to gain succours from Geoffry of Anjou, Matilda's second husband, but in this negociation was unsuccessful. Earl Geoffry, however, confided to his trust his eldest son Henry, to be brought over to England for his education. The young prince, afterwards Henry II. of England, was brought to Bristol, where he remained four years, under the training of one Matthews, a schoolmaster.*

In 1147, Robert, Earl of Gloucester, died at Bristol Castle, and was buried in the choir of St. James' Church. His estates, including the lordship of Bristol, were, as we have already hinted, inherited by William, his son, who, dying in 1189, left three daughters, his co-heiresses. John, Earl of Moreton, afterwards King

* Stow, 146. Hollinshed, 55.

John, marrying Avisà, the youngest of these ladies, acquired the Honour of Gloucester, with the town and castle of Bristol in dower.

We will now proceed to speak of the earlier maritime character of Bristol, and the rise of the place as a borough.

The nautical enterprise of Bristol has been worthy of a place that, in the words of an early writer, seems to swim in the waters; and whose quay with houses on both sides, and "hundreds" of masts in the middle, struck the eye, six centuries later, of Pope the poet, as being when the tide had left the keels dry, like a long street full of ships, which looked he said "like a dream." In taking a backward glance at the commerce of the port it seems no compliment to the progress of Christian civilization that, four hundred years after Gregory the Great had been incited, by seeing English slaves in the market place at Rome, to send Augustine and his missionaries to Britain to preach the gospel of liberty, to find this place was the chief English mart for slaves, who were exported hence to Ireland. This is the more remarkable seeing that Bristol was a chosen spot for the ministration of Jordan, one of the companions of Augustine. The traffic in native slaves was, however, suppressed by the exhortations of Wulstan, Bishop of Worcester; but it was not till seven centuries later still that slavers ceased to depart from this port, and that Clarkson, who here began his inquiries into the facts of the shameful trade, effected in the deliverance of the negro what Wulstan had done for the fair-haired Saxon.

King John was many times at Bristol, but not on matters of much historical significance. The royal



Marsh on the east end of St. Augustine's Church, thus opening a communication with the Avon. At the same time the first bridge was thrown across the Avon, and Redcliff, which had been an independent borough, was incorporated with Bristol.

So highly did Bristol rank as a port in the 14th century that at the siege of Calais (1347) Edward III. was provided by her burghers with 22 ships and 608 men, London itself being required to send more than these numbers only by 3 ships and 54 men. This naval patriotism did not go unrewarded, for it gained to the town the distinguished charter that made it a county in itself (dated 8th Aug., 1373). Among the privileges in this grant, were included the return of two representatives to Parliament; and the empowering of the Mayor and Sheriff to elect successively from time to time 40 "of the better and more honest men of the town as a council to rate and levy taxes, &c.," which common council in nearly the same form as instituted is yet maintained.

A further benefit from the hands of Edward III. was the establishment in A.D. 1354 of the wool staple in Bristol, which trade had been removed from Flanders, and with all its liberties, customs, and rights was set up in this and five other English towns.* The English wool was held to be the finest in the world; and was yearly sold to Flemish merchants to be spun by the looms of Bruges and Ghent, and thence was carried by the ships of the Baltic and the Rhine to clothe nearly every nation of the earth.† The importance of Bristol as a centre may be conjectured when it is stated that the monks of Tintern pastured at one time in the rich

* Chron. a monacho S. Albani, 32. † Som. Arch. Proc., 1867, p. 17.

meadows of the Wye no less than 3000 sheep.* Their shallop is mentioned by William of Worcester to be seen lying in Bristol harbour. The Cotswold hills and the vales of Gloucester would likewise send down their fleeces, and the meadows of Somerset would add largely to the supply.

The first mention of the office of Alderman occurs in a bye-law, 20 Edw. III., which provides that the Mayor shall annually summon before him all the Weavers, who shall upon their oath, elect four Aldermen to supervise all their craft. It was also enacted that each of these Aldermen should be chosen by the twelve principal men of the craft of Weavers, and that none should be chosen Mayor unless he had been first an Alderman. This shows the importance of the wool trade as allied to the powerful guild of Weavers.† Until the time of Edward III. it had been the custom for the Mayors yearly on Michaelmas day to “feche and take their othe and charge at the Castle gate of Bristowe, of the constable of the saide castell.” Among the immunities accorded by that royal benefactor to the municipality was a release from this feudal custom, by the ordination that henceforth the Mayor elect should take his oath of the outgoing Mayor, in the Guildhall, before all the commonalty there assembled.‡

The trading interest of the place would not be likely to receive any studied encouragement from Edward the third's effeminate successor. Richard the second, however, confirmed all the former grants, and directed that the steward, marshal, and clerk of the king's

* Tax. Eccles. P. Nich, p. 284, Taylor's Tintern, p. 41.

† Municipal Corporations Report, ap., Part II., page 1154.

‡ Ricart's Calendar.

household should not sit in the town of Bristol, as before had been granted to the city of London.* In Seyer's "History of Bristol," vol. II., p. 60, we read "Early in the year 1387 the king (Richard II.) accompanied his favourite, Robert de Vere, into Wales, on his way to Ireland, at which time he visited Berkeley." "It is not probable," adds our local historian, "that he should go to Berkeley without also visiting the castle of Bristowe." The conjecture of Mr. Seyer is verified by a reference to Froissart, who gives an account of a long stay of the king on this journey at the castle of his great western city. This mediæval Herodotus, who professes to quote from contemporary information, acquaints us that the king came hither with "the queen, and all the ladies and damsels of her court." These were the days of Chaucer, whose pictorial pen would be required to delineate the gay scene the old castle must have exhibited where so singular a devotee to pleasure as the luxurious Richard the II. was the central figure. But violent delights have violent ends. This truth Richard experienced in his subsequent visit to Bristol in 1399. He then had with him, says Froissart, "full 2000 lances, knights, and squires, and 10,000 archers. During the time" pursues the same historian, "that King Richard was holding his court at Bristol and in that neighbourhood; there was a general insurrection of the people of England. The common people said 'Times are so sadly changed for the worse since the days of King Edward of happy memory. But now we have a good-for-nothing king, who only attends to his idle pleasures; and as it would seem he cares not how public affairs are managed, so that his

* Merewether and Stephens, 738.

inclinations are gratified. We must look for a remedy, or our enemies and ill-wishers will rejoice and laugh at us.” The state of public feeling was accordingly ripe for receiving Henry Bolingbroke, who landed on July 4th at Ravenspur, and being soon joined by the lords of Lancashire, descended from the north with an army that increased like a thunder-cloud. At Berkeley he was strengthened by the forces of the traitorous Duke of York, whom Richard had left governor of the realm during his own absence. With a combined army that amounted, it is said, to 100,000 men, Bolingbroke and York presented themselves before the walls of Bristol. The town immediately surrendered, and after four days’ siege of the castle, Sir William Courtenay consented to treat with the Duke of York. “There were enclosed within the castle,” says Holinshead, “the Lord William Scrope, Earl of Wiltshire; Sir Henry Green, and Sir John Bushie, knights, who prepared to make resistance; but when it would not prevail they were taken prisoners into the camp, before the Duke of Lancaster. On the morrow next ensuing they were arraigned before the constable and marshal, and found guilty of treason for mis-governing the king and realm, and forthwith had their heads cut off.” The scene of this tragedy was the market-place where stood the high cross, at the intersection of the four principal streets. In Shakespeare’s “Richard II.” we see the victims brought forth and hear the Duke, proud Bolingbroke’s, denunciation of their misleading influence upon the weak and pliant sovereign.

By the death of Queen Johanna (1437), Bristol reverted to the crown; and the mayor was required to furnish a representation of the receipts and profits

of the town to the royal exchequer. In the account of the customs on the merchandize in ships and boats, a list is given of 220 vessels, with the particulars of the dues charged on each, the total amount being £21 16s. 8d., or about 2s. the cargo.

Bristol must be considered to have reached the height of her architectural grandeur in the 15th century. What greater evidence of this could be desired than what is implied by the erection of such noble monuments of her piety and prosperity as the tower of St. Stephen, and the church of St. Mary, Redcliff; to say nothing of St. Werburgh's Church, the Temple Church, and numberless examples of picturesque and costly residences, such as Canynge's house in Redcliff Street, and Norton's house in St. Peter Street, all of which pieces of architecture yet exist to testify to the taste and opulence of the leading burghers of that period. William Canynge the younger was perhaps the greatest merchant in England. Between 1450 and 1460 he employed on an average 800 seamen in the navigation of his ten vessels, which had an aggregate burden of 2853 tons. By a treaty, concluded between Henry VI. and the King of Denmark, he alone was suffered to trade to Iceland and Finmark. In 1449 Henry VI. sent letters to the Master-General of Prussia and the magistrates of Dantzic, inviting their favour towards certain English factors, and especially towards William Canynge, "his beloved and eminent merchant of Bristol." As mayor of the town, and a stout adherent to the Lancastrian cause, he entertained Margaret of Anjou and a large retinue, when she visited Bristol in 1456 to quicken the interest of the western counties in the declining fortunes of her husband. This attach-

ment to the fallen dynasty was not likely to go unpunished when one of so vindictive a character as Edward IV. attained the supreme power; but Canynge "made his peace" by submitting to a fine of 3000 marks, or about £20,000 of present money. This exaction took place on the king's visit to Bristol in 1461, when Sir Baldwin Fulford expiated his crime of the like loyalty to a fallen cause by the loss of his head.

Not only was Bristol eminent in her merchant princes, insomuch that an Italian, who wrote a "Relation of England" in A.D. 1500, remarks that "there are scarcely any towns of importance in the kingdom excepting two, Bristol, a seaport to the west, and York;" but she may claim, at this time, to have produced in the brilliant scholar Grocyn, the first professor or public teacher of Greek in England. He was a fellow of New College, and having studied the Greek language at Florence, delivered, on his return, lectures on this "New Learning" at Oxford. Among the illustrious persons who attended his lectures and disputations were Richard III., Erasmus, and Sir Thomas More, the former of whom presented him with a buck and a sum of money. Erasmus not only testifies to the depth and extent of Grocyn, his Greek master's scholarship, but warmly represents him as the "best and most honourable man that ever lived." Though the monks raised an outcry against Greek letters as being conducive to heresy, so that the Greek language was not taught without opposition in the universities until 30 years after Grocyn had introduced its study, a new world of literature had been opened; and the intellectual consistory of ancient Greece:—Plato, Aristotle,

and their compeers, began their lasting domination over the educated mind of England. Grocyn was born in Bristol, A.D. 1442, and died 1519.

As a fresh world for the intellect was unfolded by one born in this great western city, so to another of the sons of Bristol is due the renown of discovering a new continent of the great material globe, a continent that has itself been called, a "new world." In the annals of navigation it may be questioned if any greater name is to be found, that of Columbus not excepted, than Sebastian Cabot, who, sailing from this port, was the first European to hail the vast country that we now call the United States. The *robur et æs triplex circumpectus*, which the Roman poet thinks must have been the armour of him who first launched his frail bark upon the deep, to encounter the perils of winds and waves and rocks, must have been the attribute of the men of Bristol, who ventured over unknown waters to seek unknown shores, there to meet the further dangers of savage men and savage beasts. In proceeding up the Paraguay river three of Cabot's men incautiously strayed from the main body to gather the fruit of the palm tree, and were seized by the natives. A sanguinary battle immediately took place, in which 25 of the English party, and 300 of the natives, were slain. We now honour our heroes. We rightly glorify a discoverer like Livingstone, and, his work accomplished, we bury him with national lamentation among kings and princes; but the burial place of Sebastian Cabot is utterly unknown, and it is no credit to Bristol that the sepulchral spot of so illustrious a leader should be forgotten.

Towards the close of the 15th century, at the time

William Worcester wrote his Itinerary, the Saxon area of the town had increased four-fold. Bristol was emphatically then a city of towers. When the hermit looked down from his retreat on Brandon Mount, he might view no less than twenty-three strong towers upon the lines of crenellated walls drawn round the city, besides nine over the principal gates, one of these walls containing in its thickness five parish churches. of which St. John's alone remains. Outside the town was the spire of Redcliff on the west, and towards the north the spire of the Carmelites or White Monks, each 200 feet high. To the east were the embattled walls and seven towers of the Norman castle, of which the donjon keep was like in form and dimensions to the White Tower of London. To the west was St. Austin's Abbey, with the nave of the church and the architectural members of its conventual arrangements undestroyed. At the east end of St. Austin's was the church of St. Augustine-the-less; and just by was the College of Bon Hommes, the beauty of the buildings of which may yet be judged from its existing chapel (now the Mayor's). Then followed, in quick succession, St. Michael's Church, with the hermitage close to its walls; the Nunnery of S. Mary Magdalen at the foot of the green hill of St. Michael; the Chapel of the Three Kings of Cologne; the Hospital of St. Bartholomew; the Convent of the Franciscan or Grey Friars in Lowan's Mead; the magnificent Benedictine Priory of St. James; and, just under the merlons of the castle, the friary of the Dominicans, some important relics of which may still be seen. Besides these, in continuation of the circuit, was the Trinity Hospital at Lafford's Gate, and St.

John the Lepers' House close by; the church and sanctuary of St. Philip; the chapel of St. Anne on the wooded banks of the Avon at Brislington; the church of the Holy Cross or Temple; the Fremite Friars at Temple Gate; the Hospital at Brightbow, Bedminster; the house of St. John of Jerusalem, Redcliff Hill; and, recrossing the Avon, the chapel and hermitage of St. Vincent on the romantic cliffs. We have not mentioned the religious buildings inside the walls; but within and without the town were no less than nineteen parish churches, two of which were attached to convents. In short, there were as many as 80 towers, besides crosses, fountains, conduits, and the numberless houses, of which every one was a study.

As the town itself was clasped within its fortified walls, and like a mailed knight was ready to challenge all strange comers, so within the town the numerous fraternities of trade formed each a separate federation as close against intruders as the embattled squadrons of an army. Each parish, likewise, was a guild in itself, and close watch was kept that none moved from one parish into another without security that such persons should not become chargeable to the parish they had removed to. Of the guilds of commerce the Society of Merchant Venturers still exists, and is undoubtedly the traditional representative of a merchant corporation that petitioned Edward IV. for the confirmation of their prerogatives, and was even at that time claimed to be an ancient guild. The present company was incorporated by Edward VI., whose charter recites that men who had never been apprenticed to merchants having with strange ships encroached upon the trade of the port, to prevent

the continuance of such irregularities the freemen of the city using the art or mystery of Merchant Venturers should be incorporated by the style of master, wardens, and commonalty of Merchant Venturers of the city of Bristol. Sebastian Cabot was the first governor.

The doctrines of the Reformation are accredited to have been preached in Bristol by Wycliff himself. There can be little doubt of the fact, seeing that Edward III. had presented him with the Prebend of Aust, in the Collegiate Church of Westbury-on-Trym, in which position, with his opportunities and zeal, he could hardly fail to have recommended his opinions in this important town. John Purney, his chaplain, is known to have "preached in Brystowe, and publicly taught that the celebration of the mass is a human, and not an evangelical, tradition." About A.D. 1520, William Tyndall, famous afterwards as the first translator of the Bible, used frequently to disseminate his doctrines here, and, in 1533, Cranmer came and preached at St. Augustine's Abbey, reforming "many things that were amisse." About a year later, Latimer, whose benefice was at West Kington in Wiltshire, came to Bristol, and threw the town into confusion by the novelty of his discourses, such as that in hell there is no sensible fire; that the souls in Purgatory have no need of our prayers, but rather to pray for us; "no saints to be honored, no pilgrimages to be used; our blessyd lady to be a sinner," &c. In contradiction to these opinions Father Hubberden, a great enemy of Latimer, asserted in the pulpit of St. Thomas' Church (where Latimer had just before preached) that twenty *aves* to Our Lady should be said for one *paternoster*. He, moreover, affirmed "that the Pope is king and prince of all the

(world, that the gospel in English bringeth men to heresy," &c. Also, Dr. Powell, in defence of pilgrimages, adduced the standard scriptural text that had done duty from the time of the Council of Clermont :— "Whosoever leaveth house, brothers, sisters, father, mother, &c., and showed that whosoever went on pilgrimage to Walsyngham, St. Anne in the Wood (Brislington), left all these, and would receive a hundred fold in this world, and finally everlasting life." Father Hubberden, in his zeal, declared that all Bristol was run into heresy and knavery, but limited his calumny by saying from St. Thomas' pulpit that there / were twenty or thirty heretics in the town. Hubberden's own definition of a heretic was one who speaks "against the Pope, or any point of his acts or supremacy." That there should be even so many as twenty / or thirty depravers of the Holy Father's supremacy seemed so portentous, that Hubberden was examined on the point before the Mayor at the Council House, when the hasty priest thought prudent to withdraw his rash aspersion. All this controversy was the beginning of the end of the Pope's domination in Bristol. About three years after Latimer's preaching here, the overthrow of the monasteries was effected. Considering the magnitude of the event and its consequences, very inadequate particulars concerning the dissolution of religious houses in Bristol are recorded. Under the date 1538, in one of the MS. Calendars there is the meagre statement:—"This yeare was put down the four orders of Friars in Bristol; and also the images of saints, and pilgrimages in all England beside." The official letters of the Commissioners contain some off-hand business details, intermixed with much dreary

stupidity in unsuccessful attempts to impart to the subject a jocular tone. A sanctified cause demands a sanctified course, but malice, misrepresentation and avarice were the guiding principles of the unworthy king, courtiers, and agents who effected the confiscation of the rich endowments of monasteries, hospitals and chauntries. Some indemnity was made at Bristol by the conversion of the stately Abbey of Austin Canons into a cathedral. The foundation charter is dated June 4th, 1542, actual possession being taken by the Dean and Canons on the following 14th of August. The theory that the see is of Erastian origin and growth, and without the prestige of the ante-Reformation Cathedrals, is, however, only partially correct, though this view has been hitherto the received one. The fiat for the establishment of the cathedral, indeed, went forth from Canterbury, under the signet of Cranmer; but it is obvious that upon the revival of the jurisdiction of Rome, the usurpation by an heretical king of the Pope's prerogative in the creation of an episcopate, even had it not been a Protestant one, and effected by the seizure of a Catholic convent, was a procedure sufficiently grave to demand the Holy Pontiff's interference when his time came. Accordingly Paul IV., by letters apostolic, empowered his legate, Cardinal Pole, to refound (A.D. 1551) the see of Bristol, which re-enactment of the original charter was subsequently ratified at the Vatican. The "pernicious schism" of Protestantism being assumed to be extinguished by the coercive measures of Philip and Mary, John Holyman, a man after their own heart, was by the same document appointed by the Pope to the Bishopric of Bristol. He did not betray his faith.

The same year we find him included in a commission to proceed against Ridley and Latimer for heresy. His zeal for the reinstated service met with but unsympathetic return from the civic corporation, for we are told in Burnet's "History of the Reformation,"* that in August 1557, "a complaint was brought to the Council of the Magistrates of Bristol, that they came seldom to the sermons at the cathedral, so that the Dean and Chapter used to go to their houses in procession with their cross carried before them, and to fetch them thence; upon which a letter was written to them, requiring them to conform themselves more willingly to the orders of the church, to frequent the sermons, and go thither of their own accord." To his infinite credit, Bishop Holyman refused to officiate at the burning, in the same year, of three Protestant martyrs on St. Michael's Hill.

The submission of the people to the various ecclesiastical changes, or possibly their apathy in regard to them, is a study in human nature. The popular conscience seemed to be at the disposal of the master-will of a powerful government, to be moulded like clay on the potter's wheel to any religious form. Men had gone to church, and to church they were compelled to go, and had all their lives been habituated to the gorgeous accompaniments of the Romish Service. Pillars, arches, carved capitals, walls, roofs, mouldings, screens, tabernacles, and images, were diapered with colours and enriched with gold; the windows glowed with all the hues of the gems in the twelve foundations of St. John's vision; and the whole fabric was illuminated like the glittering missals at the high altar; while

* Pocock's Edn., vol. ii., 559.

the priests and deacons who administered at that altar were vested in cope and dalmatic of embroidered blue and green, and cloth of gold and tissue. Suddenly altars and roods were defaced; coverings of shrines, golden chalices, crucifixes, relics, paschal candles, Easter sepulchres, thuribles, sacring bells, holy water, breviaries, mass books, legends, paintings, and "all other monuments of feigned miracles, pilgrimages, idolatry and superstition" were done away; while the momentous doctrines of Purgatory, and prayers and masses for the dead, were forbidden to be believed in or practised any longer. In looking into the records of the several churches it is curious to see the apparent readiness with which these mutations were effected. And it is equally striking to observe how, after a suspension of a few years, the old doctrines and ceremonies were again, without apparent resistance, introduced. It must be confessed the ancient ritual had in restoration lost its original brightness; the second temples were not like the first; the vestments and eucharistic furniture were of diminished splendour, the services were of impoverished tone, and during the reign of Mary, even as under Edward VI., there were signs that what was decayed and waxing old was about to vanish away.

Until the fall of the monasteries that encircled the church-crowned battlements of the city, Bristol might be said to have been ecclesiastical rather than commercial in its proper character, or at most it was a commercial centre within an ecclesiastical circumference. Chatterton (whose picturesque language has even yet not been done justice to) likens Religion's self to a grey friar, who, with sad visage and slow pace, ap-

proaches the town of Bristow, and seeing the city full of soldiers and merchantmen with few saints among them, is about to retire in despair. But the heavenly visitant is met by Fitzharding, who promises to raise a tall minster for prayer and praise, where he himself would become a monk, and Religion should find secure repose. The numerous convents that rose up before and after the mitred abbey, owed their existence to the powerful Earls of Gloucester, to the Barons of Berkeley and of Beverston Castle, to the Lords de la War, rather than to merchant princes like the Canynges, the Framptons, and the Shipwards, who, three centuries later, built the glorious churches of Bristol. Franciscans, Carmelites, Benedictines, Dominicans, and Austin Canons, with the devotional guilds, hospitals, hermitages, chauntries and churches, made the atmosphere thick with clouds of incense, and must necessarily have hindered secular callings. It might have been thought that when the "cows were sent adrift," and cloistral inaction exchanged for business pursuits, that there would have been an almost sudden expansion of commercial enterprise. It is strange to notice, however, that in the year of Elizabeth (1572), when a general registration was made of the shipping of the kingdom, the commerce of the second seaport of the realm had gone backward. In that year the number of merchant ships attached to the port of Bristol was 53, of which the largest was of 140 tons, the next three being represented at 100 tons each, the aggregate tonnage being 1993.* This was less than the tonnage of Canynge's vessels alone in the previous century.

* Dom. Col. Eliz., Addenda, p. 320.

About A.D. 1574, a company was formed for the colonization of the northern districts of America. It was proposed that 100 men should be conveyed thither to remain one year, who, with friendly intercourse with the people, might gather knowledge of the country, and acquire its special commodities. The charges were estimated at £4000, of which £1000 was readily offered by Bristol, the larger sum being expected to be provided by London. The enthusiasm of adventurers was fired by the travellers' reports of what they had witnessed in these foreign lands. The streets were said to be broader than London streets; banqueting houses built of crystal, with pillars of massive silver, some of gold, were among the attractive wonders of the new country; and pieces of gold, as big as a man's fist, were to be found in the heads of some of the rivers.* The discovery of the philosopher's stone was now a needless search. Without laborious and doubtful chemical transmutation gold was to be found ready made. In September, 1577, Capt. Frobisher arrived at Bristol from Cathay, whither he had gone, by the aid of grants in money from Queen Elizabeth, Sir Philip Sydney, and others, in the hope of finding plenty of the incomparable metal. A quantity of (supposed) valuable ore was discharged from the ships, and deposited under four locks in the castle. One Jonas Schutz, engaged that two tons should yield in fine gold twenty ounces, and the ore was declared to be worth £40 a ton, which seems to have been an *a priori* estimate which the *a posteriori* view of Dr. Burcot proved to be by no means so valuable. The real truth was ascertained by two assays made in 1583. The two minute particles

* Cal. Papers, vol. i., p. 2.

of *silver* in 2 cwt. of Frobisher's ore, were not nearly so big as a pin's head, and they remain to this day, fastened by sealing wax to the report, in evidence of the worthlessness of the ore. So much for the ante-geological mind of the 16th century.*

But if geologists were few at that time in Bristol, as were saints in the early days of Fitzharding, the soldiers, even as in his time, were not a few. In the musters taken 1574 and 1575, Bristol represented 800 able men, 20 demi-lances, and 160 light horse.† At the beginning of James I.'s reign, these numbers for the most part had made considerable advance, there being then ascertained to be 5000 able men, 2500 armed men, 400 pioneers, 12 demi-lances, and 28 light horse. The strength of the national army at this period is surprising, the whole numbers being 296,131 able men, 141,310 armed men.‡

We now proceed to an important passage in the history of the present city.

By the King's writ, dated 20 October, 1634, £6500 was charged on Bristol for ship money, and further taxations were imposed in successive years.§ There seems to be but little prescriptive indication of resistance to the unpopular impost. That there were some Bristol Hampdens, whose names have been unsounded by the clarion voice of fame, we incidentally discover by an original writ of distress upon the goods of Edward Dudlestone and eleven other parishioners of Maryport, whose names are in the indictment. The writ is dated 24th May, 1638, and is subscribed by

* *Ib.* Rundall's Narrative of Voyages towards the North West.

† Pegge's Cur., I., 75. ‡ Archæologia, XV., 54.

§ Cal. State Papers, 1635-6, p. 297.

William Jones, Mayor, and the Sheriff. The sums charged upon each person vary from 2s. to 12s., and committal to Newgate within the city is the penalty for persistent refusal to pay, or in the case of there not being goods or chattels to be taken in distress. This action against individual citizens appears to have been taken in consequence of a letter from the Privy Council to the Mayor of Bristol (dated May 16, 1638). Eight hundred pounds was levied on Bristol, but the time expired without its being even assessed. "We are by his Majesty's express command to let you know," say the Lords, "that the slackness of your proceedings so apparently shows your neglect and disaffection to this important service, that unless you pay in the sum charged by the last day of next term, we require you on the 24th of June next to give your attendance upon the Board, at which time, if you give not his Majesty better satisfaction, we shall take a course to make you more sensible of your duty." It is easy to see that on the question of ship-money alone, there would be in the impending struggle between King and Parliament, a serious discount from the loyalty of Bristol.

The severe restrictions upon trade and manufactures would be another cause of disaffection to the existing government. As early as A.D. 1192, and as late as the present day, the making of soap has been one of the chief manufactures of the place. In an extraordinary narrative, by Richard of Devizes, of a Christian boy who was sent by a certain Jew from France to be crucified by another Jew at Winchester, there is incidental mention that at Bristol every one was or had been a soap maker. John Stow tells us that soap was not made

in London before the 16th century, the city depending for the supply of this article upon the importation of white Castile "soap from beyond seas," and of grey soap, speckled with white, very sweet and good, from Bristow," which latter kind was retailed at a penny or not more than a penny farthing the pound, the price however being dearer when the soap was made in London than when got from Bristol.* In the following century the "Corporation of Soap Boilers at Westminster" was constituted, whose privileges, obtained from Parliament, enabled them to impose restrictions upon like companies in the provinces. Instead therefore of the Bristol soap boilers' being traders as formerly to the London market, they found themselves not allowed to sell their soap outside Bristol, save only westward and beyond the Severn. Moreover they were obliged to pay £4 a ton duty, and were limited to the production of not more than 600 tons yearly.† One effect of this hurtful restraint was that the individual makers of soap could be allotted only definite proportions of the whole quantity allowed to be made in the city; and the State Papers of the period contain appeals to the Privy Council from various persons against the loss they suffered in their means of livelihood by the limitations to which they were subjected by the local company. In 1635 Thomas Longman of Bristol complains that having undertaken the house and trading of his master who made 200 tons of soap yearly, he is himself allowed by the Company to make but 20 tons a year, on which he cannot subsist, and prays the Lords to settle the proportion.‡

* Stow's London, 265. Fuller's Worthies.

† Cal. State Papers, 1635, p. 62. ‡ St. Papers, Dom. 1635, p. 99.

Also Richard Tovey of Bristol complains to the Lords of the Treasury that in 1630 and later years he made at least 80 tons; and was now allotted but 24 tons.* The obnoxious interference of the Westminster combination with the Bristol Company was as much a subject of remonstrance from the latter as was the action of the Bristol Soap Boilers upon their individual members. Their complaint however received slow or no remedy. In a petition in 1635 the master and wardens complain that they are poor men who have been put to the expense of travelling five times to London, and long attendance there; and now pray for a hearing to present their grievances.† The King gave them liberty to prepare a bill in the Star Chamber and retain counsel. They stayed in London, at a great expense, for the hearing, but nothing was determined. The brewers, also, had to pay 40 marks annually for a license. The city was never free from commissioners and pursuivants, who examined merchants on oath, to ascertain what commodities they had shipped, what foreign goods imported for years past; by which inquisition some were compelled to accuse each other and were sent for to London. Bristol in 1635 paid £25,000 for customs, and gave £2163 towards fitting out a fleet against France and Holland.‡

No single episode of the civil war affected Charles more deeply, or proved more decisive of the ultimate event of the struggle than the disloyalty of Bristol, and its final deliverance into the hands of the Parliament. In anticipation of the part soon to be enacted, the great tower of the castle was repaired, and ordnance

* Ib. 1635-6, p. 45. † Ib., p. 45.

‡ Evans Chron. Hist., 178.

planted on the top. A fort was erected near the river, thence called the Water Fort on the southern extremity of Brandon Hill. This communicated by a line of wall with the fort on that hill itself, where considerable remains of the redoubt are still to be seen. Thence the line trended downwards to the head of Park Street and proceeded upwards to the Royal Fort on St. Michael's Hill. The curtain then sloped easterly to Colston's Fort near the Montague Tavern on Kingsdown Parade, and onward to the fort at Prior's Hill. Hence it pursued its course by Stokes' Croft Gate to Lawford's Gate. Then after reaching the Avon, near the end of Temple Back, it completed its circuit, of between four and five miles compass, by taking in Temple and Redcliff Gates, and joining the Avon again beyond the latter point.

The Mayor, Richard Aldworth, having received a command from the King not to admit troops of either party, placed the gates of the city under double watch and ward. The loyalty of the good Mayor, however whether real or simulated, was counteracted by the contrary feeling on the part of his wife. That lady, with other influential townswomen, came to the magistrates when sitting in council, and presented petitions that Col. Essex might be admitted with the Parliamentary troops he commanded into the city. This request was soon realized (Dec. 5th, 1642). Essex after an attack upon Frome Gate, being admitted at Newgate, whereupon he immediately took possession of the city and castle. He was soon (Feb. 16th, 1643) followed by Col. Nathaniel Fiennes with five troops of horse and five companies of foot. Some suspicion of the fidelity of Essex being excited, he

was arrested, and Fiennes took the command of military affairs.

On Tuesday July 18th Prince Rupert commenced his march from Oxford towards the west, intending to lay siege to Bristol. No impression being made by his batteries, a council of war was called (26th July), and thereby it was determined to storm the city from all points at once, the time to be the next morning at daybreak. Accordingly the assault commenced before three o'clock, by the firing of the Cornish men on the other side of the city, they having anticipated the time given, through ambition to gain the first advantage of the enemy. A desperate endeavour was then made to win the works and line of Prior's Hill Fort, which was under the command of Robert Blake, afterwards the celebrated Admiral, but after the loss of Capt. Nowell and nineteen men, no entrance could be effected, Meanwhile operations had been more successfully conducted elsewhere in the line. Col. Washington finding a weak place in the curtain running between Brandon and St. Michael's Hills, at the point corresponding with the present entrance to Park Row, there centered his attack, and breaking through made entrance for horse and foot. With a reinforcement of a thousand Cornish foot, Rupert pressed on to second the troops of Washington. By mid-day the assailants had won their way to the Cathedral, which they invested, together with the adjoining churches of St. Mark and St. Augustine, from which fortresses they directed a sharp fire upon the enemy's works in the neighbourhood. At two o'clock the governor, who had boasted that a flag of truce should be his winding sheet, made signs for a

(parley, and before ten at night a treaty was concluded by which he agreed to surrender the city on condition that the inhabitants should not be plundered, and that the garrison should be suffered to march out the next morning, the officers with their full arms, bag and baggage, and the common infantry without arms. The loss of the victors is supposed to have exceeded that of the vanquished. Lord Clarendon estimates that about 500 foot soldiers, besides many tried officers, were killed in the several assaults. Though the royalists lost much blood they gained much money, for besides a contribution from the citizens to save the city from being sacked, as much as £100,000 was found in the castle.

1645 But the coming men were Cromwell and Fairfax, and with their arrival the royal cause gave "signs of woe" that not only Bristol but the kingdom itself was lost. Sherborne having fallen into the power of the Parliament, Sir Thomas Fairfax concluded that a great moral effect would be gained by the capture of Bristol.* Accordingly on August 18th, 1645, he began his march, and on Friday the 22nd arrived at Clifton. The royal garrison in the city amounted to 2,300 men, but not more than 1500 could be brought upon the line at once, and many of these were inexperienced Welshmen. Rupert having anticipated the approach of the enemy, had issued command for all the inhabitants to victual themselves for six months. There were 2500 families within the walls of the city, and of these 1500 were too poor to provide for themselves. To meet exigencies of this kind the Prince imported 2000 bushels of corn from Wales, and upon the certain approach of the

* Deane's Life of Richard Deane, 194.

enemy ordered all the cattle about the suburbs to be driven within the walls. On the 29th of August a solemn fast was kept in the Parliament camp "to seek God for a blessing upon the designs against Bristol." After this pious exercise, a Council of War was summoned, during the sitting of which news arrived that the king was in full march from Hereford to join Goring in the west;* and that when united with that general's forces, he intended to fall upon the besiegers of Bristol, and with the help of a simultaneous sally of Prince Rupert from the city to utterly rout them. The situation of the enemy was critical, but Fairfax and Cromwell were equal to the emergency. It was determined to carry Bristol by storm at any sacrifice, and without any loss of time; thus agreeing with Livy, *in rebus asperis et tenui spe fortissima consilia tutissima sunt*.

The order of the day was as follows:—Colonel Weldon and his Taunton Brigade were to storm on the Somersetshire side in three places, viz:—"200 men in the middle, and 200 on each side as Forlorn Hopes, were to begin the assault; 20 ladders, each carried by two men, who were to have 5s. a piece, were to be planted against the wall, the two sergeants who attended the service of each ladder were to have 20s. Twelve files of men, with firearms and pikes, were to follow each ladder to its place, where it was to be planted. Each party of twelve was to be commanded by a captain and lieutenant, the lieutenant to go in first with five file, the captain to succeed with the other seven. The 200 men appointed to second the stormers were to furnish each party of them with 20 pioneers, who were to march in their rear. The 200 men to be

* Clarendon.

commanded by a field officer, and the pioneers by a sergeant. The pioneers were to level the rampart or wall, and make way for the horse," &c.*

General Fairfax's Brigade, under the command of Col. Montague (afterwards the celebrated Admiral Sir Edward Montague, who brought Charles II. over to England, 1660), were to storm on both sides of Lawford's Gate, on the Gloucestershire side, in the same order as the Taunton Brigade on the Somersetshire side of the town. Both assaults were to begin at the same time.†

Col. Weldon took up his post (Sept. 10th) on Pile Hill, on the south side of the city.‡ On the Gloucestershire side everything succeeded according to anticipation. The lines were carried, and twenty-two cannon and many prisoners were taken, and all the forts except one—Prior's Hill Fort, which was so high that a ladder of thirty rounds scarcely reached the top. Beneath this place Col. Ramsborough fought nearly three hours. "The enemy," says Cromwell, "had four pieces of cannon upon it, which they plied with round and case shot upon our men." At length some of the soldiers, entering through the embrasures, helped others up, and the colours were captured. The defenders then yielded, and the fort was won. The infuriated assailants "immediately," says Cromwell, "put almost all the men in it to the sword."§ Major Price was killed, together with the commandant and all his officers, the few who escaped the massacre owing their lives to the interference of the Parliamentary leaders. Next day, while Fairfax and Cromwell were sitting within the captured fort, and

* Deane's Life of Rd. Deane, 197. † Ib.

‡ Carlyle's Cromwell, i., 183. § Ib., 185. Deane, 203.

discussing their successes, a ball, aimed by a cannonier from the castle, whistled by within two handbreadths of them. A little more accuracy of aim would have rolled back the tide of war, and been the means of diverting the current of many succeeding years.

On the Somersetshire side the attack failed, through the shortness of the ladders. Col. Weldon was repulsed with the loss of about a hundred men.*

"Being possessed of thus much," reports Cromwell, "the town was fired in three places by the enemy, which we could not put out, which begat a great trouble in the General and us all, fearing to see so famous a city burnt to ashes before our faces. Whilst we were viewing so sad a spectacle, and consulting which way to make further advantage of our success, the Prince sent a trumpet to the General to desire a treaty for the surrender of the town, to which the General agreed; and deputed Col. Montague, Col. Rainsborough, and Col. Pickering for that service, authorising them with instructions to treat and conclude the articles. These articles being agreed upon, preparations were made for the departure of the garrison, and on Thursday, at two o'clock in the afternoon, they marched out with Prince Rupert at their head." "We had not killed of ours in the storm," says Cromwell, "nor in all this siege, two hundred men." "He who runs may read," remarks the same Oliver, "that all this is none other than the work of God. He must be a very Atheist that doth not acknowledge it."

"Prince Rupert rode out of Bristol amid seas of angry human faces, glooming unutterable things upon him."† The King was at Ragland when the news came

* Cromwell's Letter, Carlyle i., 186. † Carlyle i., 183.

of the loss of Bristol. The blow was one of the heaviest he had received. In the memorable letter in which he dismisses Prince Rupert from his service, he passionately says:—"I must remember you of your letter of the twelfth of August, whereby you assured me that if no mutiny happened, you would keep Bristol four months. Did you keep it four days? Was there anything like a mutiny?"

On September 12th, it was ordered in the House of Commons "That threescore pounds be bestowed on the three messengers, *videlicet*, William Rabisha, Edward Neve, and Phineas Payne, that brought the great and very good news of taking Bristoll, the castle, and all the forts, cannon, arms and ammunition, to each of them £20; and that this threescore pounds be forthwith paid to them accordingly, by the Committee of the West."*

We may here touch upon the rise of Nonconformity in Bristol.

On 19th September, "the Committee for establishing a godly and pious preaching ministry" was appointed. Accordingly, at Christ Church, the learned Dr. Stanfast was succeeded by one Ewens, a tailor. The Vicar of St. Philip's was supplanted by Edward Hancock, a butler, who, when removed at the Restoration, opened a public house at Horfield. Towgood, of St. Nicholas, was first of all manacled with common malefactors in a filthy dungeon, then sentenced to be shot, a fate that he barely escaped, and afterwards imprisoned in Bristol Castle, without fire or light, or any friend being allowed to visit him. The bishop and his lady having been ejected from the palace, that building was made to serve many years for a malt house.

* H. C. Journal, iv., 273.

Though the path to the clergy was rather over thorns than flowers, their Puritan brethren enjoyed halcyon days. Cromwell rejoices that "Presbyterians, Independents, all have here the same spirit of faith and prayer, the same presence and answer; they agree here, have no names of difference; pity it should be otherwise any where!"

The beginning of Dissent here is referred to the year 1604, when Mr. Yeamans, a Puritan clergyman then holding the pulpit of St. Philip's, would not suffer his hearers to use any "blind devotion, as bowing at the name of Jesus, nor to enjoy their customary walking and profaning of the Sabbath." He, moreover, commenced the custom of "holding separate assemblies at uncanonical hours in unconsecrated places, and for the services of free prayer and praise, otherwise than that of the Church of England." Upon the death of Yeamans, the like irregular practices were continued by another clergyman named Hazard, many people from different parishes being attracted to his ministry. A secession followed, five persons leading the way by freeing themselves altogether from the shackles of Episcopalianism. This was in the year 1640, and it led to the organization of a dissenting society, whose numbers just before the civil war broke out, had increased within "the city and country near 15 miles round" to about 160 persons. Persecution soon commenced, "for the Professors meeting one day in a house in High Street, the house was assaulted by the rude multitude and seamen, so that they broke all the windows, because they heard there was a Conventicle of Puritans, which to them was a very strange and unheard of thing for people to meet in a church

with a chimney in it, as they termed it.”* Also, about this time “y^e parsons of y^e parishes” received instructions that their communicants should kneel at the Sacrament. “Y^e good people, especially some of the chief, could not bear it, nor would not kneel, but sitt, which would not be borne by the parsons. Then they would not come at all to their Sacraments, but at such times would get out of Towne, or meet together if they could get any godly minister to preach to them, and some would rent houses in other parishes where they could hear a good man, or towards Cathay, out of the Bishop’s diocese, for their respective families to spend the Lord’s Day, going thither over night on the last day of the week, and the second day return again to their shops and places, where they kept their trades and vocations all the week. Thus they shifted up and down for some years, when the clergy began to be high.”†

The house in High Street where the primitive congregation met, was that of a grocer named Kelly, who by and bye dying, his wife persevered in godliness, and it might be said of her as of Ruth, “*All the city did know her to be a virtuous woman.*” She continued the grocery business in the same street, “between y^e Guilder’s Inn and y^e High Crosse, where she would keep open her shop on y^e time they called Christmas Day, and sit sewing in her shop, as a witnesse for God in y^e midst of y^e citty, in y^e face of y^e sun, and in y^e sight of all men.” Dame Kelly (“who was the first woman in the City of Bristol that practized that truth of the Lord *Separation*”) accepted for her second husband, Mr. Hazard, who had continued Mr. Yeaman’s work. He

* Broadmead Records, 10. † Ib.

preached some time (A.D. 1639) as a lecturer at Redcliff "publique place," (which is Puritan English for *church*) "till a minister was provided by those that had y^e donation." Hazard afterwards had given to him the Vicarage of St. Ewen's, which stood on the site of the present Council House. Suddenly his wife was struck by the thought that to hear the reading of the Common Prayer was a mortal sin. Not to frequent her husband's ministry, who, in the services of the church, was obliged to use that obnoxious instrument, seemed unkind, but having ascertained that the use of printed prayers was "the worship of the beast and his image," she and Goodman Cole, a butcher, Richard Moone, a farrier, Goodman Atkins, and Bacon, a young minister (making together "four men and one woman") "engaged themselves to the Lord and one to the other," to hear Common Prayer no more; "but after the Common Prayer was over in the morning, when the Psalm was singing, they would go in to hear Mr. Hazard preach." Shortly after this, "on a time called Easter, because Mr. Hazard could not in conscience give the Sacrament to the people of the parish, he went out of town, and took that season to visit his kindred at Lyme."

The "Records of a Church of Christ meeting at Broadmead," which we have been quoting, give a curious but not altogether unprejudiced account of the first advent of Quakers to Bristol. The avenue to the Friends' Meeting House in Merchant Street is called "Quakers' Friars," which seems an odd conjunction of terms, but is apparently explained by the fact that the Quakers had chosen the site and some of the buildings of the Friars Preachers for

their scene of worship. If we are to believe their arch enemies the Baptists the name would scarcely be inappropriate even had they established themselves anywhere else, for these early Baptists attempt to prove that Jesuits and Quakers have elements in common, and that the first two Quakers who came to Bristol were really disguised Franciscan Friars, who, thrusting themselves "into the meetings of the church," began to find fault with both doctrine and practice, and with whatever did not square with their own "Doctrine of Divills." The Apostle Paul, we are assured, had these Quakers in view, when he declared that Satan's emissaries were transformed into ministers of righteousness, whose end shall be according to their works. "Thus their coming as foretold, they were not known; but afterwards they were called by the name of Quakers, from people's shaking and quaking that received them and their doctrine, and then they were fixed to their opinion after such a fit upon them. Thus the damnable doctrine, even denying the Lord that bought them, promoted by Jesuits, and assisted by evil spirits from the Devill, was founded."*

The same Records then give some weak evidence on the oath of a Bristol ironmonger, whose information was derived from the assertions of a Roman Catholic Irishman, to prove that Franciscan Friars and the "Hereticks called Quakers" were one and the same company, or if not, that the Jesuits were the main-spring of the latter body.

Twelve years after the tragedy at Whitehall, at which time the Mayor of Bristol had proclaimed "that there was no king in England, and the successors of Charles I.

* Broadmead Records, 38.

were traitors to the State," the Sheriff and Mayor proclaimed Charles II. at the High Cross.

In May, 1660, the city having returned to its allegiance, entreated the King for a ratification of their former privileges. Thereupon, in a letter to the magistrates, dated September 24th of the same year, Charles confesses a particular kindness for Bristol, as a place where he has long resided. He wishes all who had been removed from the Corporation for their loyalty to be restored.*

On November 21st, complaint is made to Secretary Nicholas of the Council, that the magistrates are obstructed in administering the oaths of allegiance by Quakers and Anabaptists, and power is requested to imprison the refusers; and also application is made for a warrant to recover a horse and silver wire basket of the late king, from George Bishop, a Quaker of Bristol, formerly a clerk at Whitehall.† Three days later, the Secretary of State is informed that some of the Quakers and Anabaptists who refuse the oath were petitioners for the trial of the beheaded king. "These monsters are more numerous in Bristol than in all the West of England, and have meetings of 1000 or 1200 to the great alarm of the city."‡ Also, it is declared, that eighteen barrels of gunpowder were found in the house of Major Roe, a Quaker, who bore arms against Charles I.

In September, 1663, the King and Queen, with James, Duke of York, and Prince Rupert, came to Bristol, and were welcomed with due loyalty. On this occasion the Mayor, and William, his son, John Knight, and Robert Atkins (the historian of Gloucestershire), received the honour of knighthood, and, soon after, Robert Yeamans

* Dom. Cal. Ch. ii., 274. † Ib. 360. ‡ Ib. 363.

was the subject of the like mark of royal favour. This was the introduction of a fresh caste in Bristol society, and a question soon arose whether aldermen who were not knights, or knights who were not aldermen, should be accounted the most honourable. As a starry-tailed peacock is to his starless barn-door brother, so was the new created knight, in his own estimation, to the undecorated alderman; but this theory unfortunately did not accord with the majesty of the aldermanic soul. *Nec deus intersit, nisi dignus vindice nodus*; but here was a difficulty that was worthy of a god, or at least of a king (who, according to Herrick, is a mortal god) to descend from his sphere to solve. Accordingly (February 8th, 1664) there is a petition of Sir Robert Cann, Bart. "Mayor of Bristol during his Majesty's late visit, and Sir Robt. Yeamans, then Sheriff, to the king, for permission to take their proper place and precedence, an order of Common Council in Bristol having been issued, that aldermen and their wives shall have precedence of knights and baronets and their wives, which is contrary to usage, and prejudicial to the king's honour."* The petitioners were victorious, the king immediately decreed that the order of Common Council should be annulled, and that his own directions concerning precedence in the city should be entered in the public registers of Bristol.†

In sequence to, though possibly in no way connected with this great problem of etiquette, there appeared in the same (1664) and the following year two fine comets, whose orbits were afterwards calculated by Halley from the observations of Hevelius.‡ It is curious that the

* Dom. Papers, ch. ii., 272.

† Hind's Comets, 106.

‡ Ib., 477.

Broadmead Records in giving a description and interpretation of the prophetic meaning of the appearance of these strange guests among the stars, that

“from their horrid hair
Shook pestilence and war.”

tell also of a third comet, of which no mention is made in the catalogues of astronomers. As a specimen of 17th century scientific, or rather non-scientific, observation, we quote the passage at large:—“*Blazing Stars*.—In this year, 1664, there were three Blazing Stars seen in England in four month's space. The first star appeared in the beginning of December 1664, and continued about fourteen days, and then disappeared. The second appeared in the latter end of December 1664, and continued till about the latter end of the 11th month, January, following. The third Blazing Star appeared in the latter end of the first month, March 1665, at 4 of the clock in the morning, and continued till the mornings swallowed it up with day. This was noted and recorded by Mr. Ewins (a Puritan minister), also by Mr. Ewins figuring down which way the tail of each star lay. The first star's tail lay west-north-west, by my* apprehension, which might point out England (which lyeth so off the continent); and God's judgments were sore upon it presently, by the great plague that followed in the An^o. 1665, and by destroying the metropolitan city by fire, An^o. 1666, and by war with the Dutch, wherein we, this nation, sustained great loss. I gather (by said Mr. Ewin's figure of the said stars) that the second star's tail lay east and by north-east, which might point out Holland and

* Edward Terrill, the author of “The Records.”

Germany. And did not there follow sore desolations upon Holland, and the lower part of the Emperor's country? The third star's tail, I perceive (by as afore-said), lay south-south-east; and doth not that point out France and Spain? but France especially, that it may be the Lord showed us, should taste of the third cup," &c.

Notwithstanding such active attention to the arts of war and religious persecution at home the Colonial interests of the city were not neglected. In the settlement of Virginia and other American colonies the merchants of Bristol took a prominent part. On 29 Feb. 1632 a patent was granted upon petitions to Robert Aldworth and Giles Elbridge, merchants, of 12,000 acres of land in New England, and an additional 100 acres for every person transported by them to New England within seven years, provided they abode there three years; the 12,000 acres were to be laid out near the river Primaquid, and were allotted in consideration of their having undertaken to build a town there, and settle inhabitants for the good of that country.*

In January 1657 leave was given to Mr. Ellis of Bristol to send a thousand dozen of shoes to the island of Barbadoes, and another 1000 dozen in December. The exportation of Quakers to the same place was a far more exceptionable species of freight. In 1665 eight of the crew of the *Mary Fortune*, of Bristol, certified that Callendar Birton, Barth, Crooke, and Lewis Rogers, Quakers, were put on board their ship to be transported to Barbadoes, but the voyage being delayed for some days the sailors "were smitten by the

* Sainsbury's Col. Papers, i., 141.

Lord with a terrible fear at conveying away innocent persons who walk in the fear of the Lord, whereupon they put these men on shore again.”* On July 19 and 20, 1666 twenty-three Virginia ships came into Bristol port, 19 being laden with tobacco and 4 with sugar, indigo, and cotton, and a good quantity of beaver. They were in season for St. James’ fair, and rejoiced the town, which had lately suffered £50,000 loss in the “Nevis ships.” The fleet of Virginia ships had six or seven men of war to guard them, but they met with no enemy on their passage. The customs due from them amounted to upwards of £30,000. At the period of their arrival a splendid new 50 gun frigate, the St. Patrick, having lately been built and launched at Bristol was waiting for a crew, and 300 able seamen were pressed from the Virginia ships.† On July 28 (1666) the St. Patrick was reported to have sailed full of men and courage. She proved an excellent sailer, and was further reported to have met six or seven French privateers, to have sunk three, and taken the rest. On Feb. 5 of the following year she was herself captured near the North Foreland by two Dutch men-of-war, her captain was killed, and most of the men desperately wounded. Samuel Pepys gives some account in his Diary‡ of her loss, and says that it was owing to her boldness in chasing two ships, the want of powder, and the desertion of her own fire ship.

A few months later the Virginia fleet came to great grief. On August 13th (1667) news was brought that four Dutch men-of-war with two fire ships had assaulted

* Col. St. Papers, ch. i., 1664.5, p. 164.

† Col. St. Papers, ch. ii., 1665, p. 556, 564, 566.

‡ Pepys Diary, iii., 395, 405.

the British ships in James' River Virginia, burnt the Elizabeth frigate and five merchant men, most of them belonging to Bristol. The enemy then sailed for Scilly. This ill news was afterwards confirmed.

Lord Macaulay in speaking of Bristol as it existed about this time remarks: "Next to the capital, but next at an immense distance, stood Bristol, then the first English seaport, and Norwich, then the first English manufacturing town. Both have since that time (c. 1685) been far outstripped by younger rivals; yet both have made great positive advances. The population of Bristol has quadrupled. The population of Norwich has more than doubled."

"Pepys who visited Bristol eight years after the Restoration, was struck by the splendour of the city. But his standard was not high; for he noted down as a wonder the circumstance that, in Bristol, a man might look round him and see nothing but houses. It seems that, in no other place with which he was acquainted, except London, did the buildings completely shut out the woods and fields. Large as Bristol might then appear, it occupied but a very small portion of the area on which it now stands. A few churches of eminent beauty rose out of a labyrinth of narrow lanes built upon vaults of no great solidity. The hospitality of the city was widely renowned, and especially the collations with which the sugar refiners regaled their visitors. The repast was dressed in the furnace, and was accompanied by a rich beverage made of the best Spanish wine, and celebrated over the whole kingdom as Bristol milk.* This luxury was supported by a

* "Though as many elephants are fed," says old Fuller, "as cows grazed within the walls of this city, yet great plenty of this meta-

thriving trade with the North American plantations, and with the West Indies. The passion for colonial traffic was so strong that there was scarcely a small shopkeeper in Bristol who had not a venture on board of some ship bound for Virginia or the Antilles. There was, in the transatlantic possessions of the Crown, a great demand for labour; and this demand was partly supplied by a system of crimping and kidnapping at the principal English seaports. Nowhere was this system in such active and extensive operation as at Bristol. Even the first magistrates of that city were not ashamed to enrich themselves by so odious a commerce. The number of houses appears from the returns of the hearth money, to have been in the year 1685, just five thousand three hundred. We can hardly suppose the number of persons in a house to have been greater than in the City of London; and in the City of London we learn from the best authority that there were fifty-five persons to ten houses. The population of Bristol must therefore have been about 29,000 souls.”*

Lord Macaulay had no exaggerated opinion of the honesty of public officers in Bristol. He says he cannot reckon among Judge Jefferies’ crimes the reprimand given by him to the magistrates on the kidnapping for which the city was infamous. Had the eloquent historian met with a report of the Commissioners of

phorical milk, whereby Xeres or Sherry Sack is intended. Some will have it called milk, because (whereas nurses give new-born babes in some places pap, in others water and sugar) such wine is the first moisture given infants in this city. It is also the entertainment, of course, which the courteous Bristolians present to all strangers, when first visiting their city.”—*Worthies*, 34.

* Macaulay’s Hist. Eng., i., 165.

Customs recently published in the Calendar of Treasury Papers, he would hardly have moderated his estimate of the want of integrity in official administration here. Under the date, Nov. 12, 1691, there is a Report of the Commissioners of Customs to the Lords of the Treasury, on the petition of John Dutton Colt, Esq., Collector of Customs in the Port of Bristol, who, suspecting a combination amongst the officers in that port, planted one he thought might be confided in with the suspected officers, and on board the "Bristol Merchant" the factor detected the officers and merchants in combination, and the petitioner recovered for the king £2772 besides £500 which the officers were fined; the officers were also condemned to stand publicly in Bristol at the Assize time, with a paper signifying their crimes.*

There were, however, better men in Bristol than these delinquent officers of the Customs, who had their reward. If it is "only noble to be good," few men of more dignity of character are to be found than Edward Colston. His splendid benevolence has made his name a household word among his townsmen, and John Kyrle is not more "the man of Ross" than Edward Colston is the "man of Bristol," though unfortunately he has not like the former hero been celebrated in numbers by any bardic author of "Moral Essays." He was born in Temple Street, Bristol, Nov. 2nd, 1636, but much of his life was spent in or near London. After the death of his father in 1681, he settled in Bristol, and carried on the business he had inherited, which was principally that of a merchant to the West Indies, whence he imported sugar and other commodities in exchange for English goods. In partnership

* Cal. Treas. Papers, 201.

with Sir Thos. Day, Captain Nathaniel Wade (who was implicated in the Monmouth Rebellion), and another, he set up a sugar refinery at the Old Mint, now St. Peter's Hospital. To enumerate his charitable works would be impossible, so many of them having been done secretly. In the foundation of schools and alms-houses, repairs of churches, &c., so far as known, he gave £70,695, which of course in his day represented a much larger sum than at present. He lost one ship and would probably have lost another had not the leak been stopped by a dolphin insinuating itself into the hole. At least this is the explanation of a dolphin being selected for his crest. His benefactions were not restricted to Bristol. Every year he went through Whitechapel prison and the Marshalsea to shower his money in freeing the most deserving debtors incarcerated for small sums, and in one case he sent £3000 to liberate the poor debtors in Ludgate prison.* He gave £20,000 to relieve the starving poor of London in 1709, a year of famine. In at least one instance he was more ready to give than his munificence was to be accepted. In 1702 when he proposed to increase the number of scholars in Queen Elizabeth's Hospital from 44 to 100, provided the Corporation would erect a commensurate building, the Bristol Aldermen refused the offer, and denounced the institution as a "nursery for beggars and sloths, and rather a burden than a benefit to the place."† This churlish rebuff did not however prevent his establishing a similar institution on another spot in the city. The great house on the site of St. Augustine's Back, which

* W. W. Webster, *Cassell's Technical Educator*, iv., 22.

† *Ib.* Evans, 251.

occupied the site of the present Colston's Hall, was purchased, and converted into a Hospital for 100 boys to be fed, clothed, and instructed in writing and arithmetic, till they should attain the age of 14 years, with £10 each as fee of apprenticeship. The expense of erection and endowment, all in his life time, was £40,000.* He died at Mortlake in 1721 at the age of eighty-five. He did no evil to live after him, and the good he did was not interred with his bones. Three societies yearly assemble on "Saint" Colston's day (Nov. 2nd) and celebrate his memory with flowing cups and flowing speech; and at the same time more practically recognise his philanthropic character by the contribution of liberal alms to the poor that are always with us. Up to the end of 1874 the amounts severally collected by the Dolphin, Anchor, and Grateful Societies have attained an aggregate of £115,243.

A spirit not altogether of another sort, though one was a high Tory Churchman and the other a Quaker, was Richard Reynolds, a native of Bristol, and one of the promoters of the Coalbrookdale Company. Before we touch upon his deeds of charity we will speak of the origin in Bristol of the great hardware company with which he came subsequently into connection.

Abraham Darby, a Quaker, with three others of the same persuasion, who provided the requisite capital, set up works at Baptist Mills in the neighbourhood of Bristol, where he carried on the business of brass and iron founder. The art of casting had at this time (about 1700) made such small progress in England that cast iron pots, which formed the principal cooking

* Evans, 353. Tovey's Colston, 122.

utensils of the working class, were imported from abroad. Darby, in his efforts to improve the home manufacture of these articles, made, like others who had preceded him, the first moulds of clay, but they cracked and burst, and one trial after another failed. With a view to ascertain the successful method of casting "Hilton ware," as it was then called, he went over to Holland whence it was imported, and after diligent inquiry found that the whole secret consisted in its being cast in fine dry sand. Returning to Bristol with some skilful Dutch workmen, he commenced the new manufacture. The work was first carried on with great secrecy lest other manufacturers should copy the art, and the precaution was taken of stopping the key holes of the door while the casting was in progress.* The recital of the patent, remarks Mr. Smiles, is curious, as showing the backward state of iron founding at that time. It sets forth "that whereas our trusty and well-beloved Abraham Darby, of our city of Bristol, smith, hath by his petition humbly represented to us, that by his study, industry, and expense, he hath found out and brought to perfection a new way of casting iron-bellied pots, and other iron-bellied ware in sand only, without loam or clay, by which such iron pots and other ware may be cast fine and with more ease and expedition; and may be afforded cheaper than they can be by the way commonly used; and in regard to their cheapness may be of great advantage to the poor of this our Kingdom, who for the most part use such ware, and in all probability will prevent the merchants of England going to foreign markets for such ware, from whence great quantities are imported, and likewise may in time

* Smiles Industrial Biog., 81.

supply other markets with that manufacture of our dominions, &c., * * grants the said Abraham Darby the full power and sole privilege to make and sell such pots and ware for and during the term of fourteen years thence ensuing.”*

Darby's arrangements for carrying on the manufacture upon a large scale did not meet with the approbation of his partners. He therefore abandoned the Bristol firm, and in the year 1709 removed to Coalbrookdale in Shropshire, where he commenced the trade on his own account, and thus laid the foundation of the vast foundry for which that place is yet famous. Richard Reynolds who succeeded Darby's son in the management of the works was born in Bristol in 1735. During the later years of his life, while living at Bristol, he had four almoners constantly employed, finding out cases of distress, relieving them, and presenting their accounts to him weekly, with details of the cases relieved.† He sent £20,000 to London, to be distributed during the distress of 1795, and £500 anonymously, besides an acknowledged sum to relieve distress in Germany. Many other of his good deeds might be mentioned, but as his life has been published in a separate volume our having here simply re-called his memory may suffice. “The Reynold's Commemoration Society,” is one of the institutions of Bristol.

Another notable Quaker who flourished in Bristol contemporaneously with Reynolds, was Richard Champion, who has several claims for not being altogether forgotten. One of these claims is indeed of a negative character. It was by his ruthless instigation the historical High Cross that had been transferred

* *Ib.*, 82. † *Smiles*, 97.

from the centre of the city to College Green, was removed from the latter place to be stowed as lumber until finally sold by the presumptuous Dean, Cutts Barton. A better reason for his memory being kept alive is the existence of many valuable pieces of Bristol porcelain of which he was the manufacturer. Champion purchased the patent for making this now coveted ware from Joseph Cookworthy, and in 1768 he established porcelain works at Castle Green, under the firm of Cookworthy and Co. After purchasing Cookworthy's share in 1773 he began to enlarge the Castle Green works, and applied to the House of Commons for the prolongation of the patent granted to his former partner. The influence he brought to bear on his application was so considerable that George III. purposely delayed the prorogation of Parliament in order that his appeal might have effect. Champion having carried on the works at Bristol with apparently not much commercial success during a course of thirteen years, from 1768 to 1781, sold his patent to a company of Staffordshire potters. In 1782 he was appointed Deputy-Paymaster to the Forces under Burke, and died in South Carolina in 1791.

Though Bristol china is now more eagerly sought after than any other porcelain, it would appear from a local advertisement in 1772 that its earlier reputation was very small. "The manufactory," it is remarked, "is not at present sufficiently known," and an "N.B." is added to the effect that "there is some of the old china which will be sold very cheap." In contrast to this cheapness three fine vases described as of great rarity and extreme beauty, were exhibited within the last year or two at the Burlington Fine Arts Club, and

valued at above £1000. An oval plaque in biscuit, with the arms of Burke and Nugent in relief, surrounded by a wreath of flowers of the most exquisite workmanship, was sold by Southeby in 1871 for 99 guineas; at the same time a pair of vases fetched 230 guineas.* Some pieces of the most elaborately decorated tea service known, each piece having a rich arabesque gold border, enclosing spaces of Byzantine pattern work, &c., which formed part of a complete service presented by Mr. and Mrs. Champion to the wife of Edmund Burke on his being returned member for Bristol, have realized thrice the value of their weight in gold † Mr. Burke's country residence was at Beaconsfield, the estate that gave title to the late Mrs. Disraeli. When Mr. Disraeli was the guest of Mr. Romaine Callender, on the occasion of the Conservative demonstration at Manchester, the teapot used was that of the very set of china just adverted to, and cost Mr. Callender £220, the like cup and saucer placed before Mr. Disraeli at the tea table having cost the same owner £90.‡ The high prices offered for Champion's porcelain have set forgers to work; and the envied crossmark has been put on a great many pieces of Oriental china bearing some resemblance to the Bristol article.§

Many of Burke's published letters are addressed to Richard Champion, and in one of them he asserts it was by that gentleman's invitation and that of Joseph Harford he was induced to stand for Bristol, and he never would have been a candidate for the place but for their persuasion. Certainly one of the most

* *Bristol Times and Mirror*, April 25, 1871.

† *Sat. Rev.*, Nov. 15, 1873. *Queen*, newspaper.

‡ *Sat. Rev.*—*Ib.* § *Queen*. Owen's Ceramic Art.

honourable episodes in the history of the city is the election of that eminent statesman as one of its representatives in Parliament. From the foundation of the borough until now no more distinguished name than his is to be found in the roll of its representatives. The circumstances were briefly as follows:—On the dissolution of Parliament on 30th Sept., 1774, writs were issued on 1st Oct., returnable on 29th Nov. On 7th Oct. a meeting for the selection of candidates was held at the Guildhall, Mr. Peach in the chair. The first man whom it was resolved to nominate was Henry Cruger, merchant, who having addressed the meeting and thanked the electors for their preference, Mr. Joseph Harford proposed, and Mr. Richard Champion seconded the proposal, that Edmund Burke, Esq., should be also put in nomination. The cry of “Cruger only,” and the fear that a coalition might spoil that gentleman’s chance of election prevailed against Burke being asked to stand. Harford and Champion went immediately to Bath, where they met Mr. Burke and acquainted him with the disposition of the town; upon which it was determined to waive his nomination. Burke then set out for Malton in Yorkshire, where he was quickly elected. Lord Clare and Matthew Brickdale were shortly nominated candidates, but on the second day of the election his lordship retired in disgust. At the instance of Harford and Champion special messengers were then despatched for Mr. Burke to propose his nomination for Bristol, and to bring him in free of all expense. The prize was worth ambition. Acting therefore with the consent and advice of his friends at the northern town he set off to make his personal appeal to the electors in the west. He was in his

chaise both day and night, and it was thought he had done a prodigious feat of locomotion when, by leaving Malton at six o'clock on the Tuesday evening and arriving at Bristol on the Thursday afternoon, he had travelled 270 miles in 44 hours.* The polling had already advanced six days. Burke immediately upon his arrival (Oct. 13th) proceeded to the Guildhall, mounted the hustings and addressed the people. From the time he had left Malton to that instant he had not slept, and in mentioning this prolonged wakefulness to the meeting he happily added, "If I should have the honour of being freely chosen by you, I hope I shall be as far from slumbering or sleeping when your service requires me to be awake as I have been in coming to offer myself a candidate for your favour."

The poll was kept open till the 2nd day of Nov., which gave him opportunity in the course of his canvass to view the remarkable scenery of the neighbourhood. The time being the end of Autumn the acclivitous woods of Leigh had lost their green leaves, but the majestic rocks on the nearer side of the Avon afforded him a felicitous illustration when upon his election, after energetic opposition, and the usual display of temper on either hand, he had the welcome duty to "thank his friends."

"As for the trifling petulance," he says, "which the rage of party stirs up in little minds, though it should show itself even in this court, it has not made the slightest impression on me. The highest flight of such clamorous birds is winged in an inferior region of the air. We hear them, and we look upon them, just as you gentlemen, when you enjoy the serene air on your

* Macknight. Pine's Bristol Poll Book, 1774.

lofty rocks, look down upon the gulls, that skim the mud of your river, when it is exhausted of its tide."

The declaration of the poll was for Henry Cruger 3565, Edmund Burke 2707, Matthew Brickdale 2456. Mr. Cruger then came forward and returned his thanks to the electors for the honour they had conferred on him, and Mr. Burke followed. The famous story of Cruger's speech being simply, "I say ditto, ditto, to Mr. Burke," seems to be a myth. The Poll Book says nothing of it, and the circumstance of his address being before, and not after Burke's is against the fact. Mr. Brickdale in a short speech intimated his intention of appealing to another tribunal (which he did, but his petition to Parliament against Burke's return was unsuccessful). Messrs. Cruger and Burke then left the hall, and mounted their triumphal chairs. They were carried through the principal streets of the town, attended by a long procession, and then retired to the Coopers' Hall to dinner.

"Thus ended," says the Poll Book, "a contest the most tedious ever known in this city. It was protracted to so great a length by the constant admission of freemen, even to the last day of the election. From the 1st of Oct. to the conclusion of the poll no less than 2080 took up their freedoms."

The question whether the representative should be passive to the will of the electors, and vote always according to their dictation, was decided by Mr. Cruger in the affirmative, but Mr. Burke proved of too inflexible a principle to crouch to the inclinations of his constituents, irrespective of his own judgment and convictions. "Certainly, gentlemen," he says, "it ought to be the happiness and glory of a representative

to live in the strictest union, the closest correspondence, and the most unreserved communication with his constituents. Their wishes ought to have great weight with him ; their opinion high respect ; their business unremitted attention. It is his duty to sacrifice his repose, his pleasures, his satisfactions to theirs ; and above all, ever, and in all cases, to prefer their interest to his own. But his unbiassed opinion, his mature judgment, his enlightened conscience, he ought not to sacrifice to you, to any man, or to any set of men living. These he does not derive from your pleasure ; no, nor from the law and the constitution. They are a trust from Providence, for the abuse of which he is deeply answerable. Your representative owes you, not his industry only, but his judgment ; and he betrays, instead of serving you, if he sacrifices it to your opinion. My worthy colleague says, his will ought to be subservient to yours. If that be all the thing is innocent. If government were a matter of will upon either side, yours, without question, ought to be the superior. But government and legislation are matters of reason and judgment, and not of inclination ; and what sort of reason is that in which the determination precedes the discussion ; in which one set of men deliberate and another decide ; and where those who form the conclusion are perhaps three hundred miles distant from those who hear the arguments, &c."

On the principles here expressed Burke persistently acted, but his high-minded independence cost him his seat a few years afterwards. He voted on several occasions at variance with the desires of his constituents. He took a course which offended them on the question of the American war, on that of Irish Free

Trade, on subjects relating to the Catholics, and on some questions related to the law of debtor and creditor.* His defence on the hustings at Bristol in 1780 of the policy which had dictated the course he had followed on each of these topics, "is one of the most convincing pieces of popular oratory on record."† It has been said that it was the warning which Burke's treatment at Bristol held out to statesmen, that caused Sir Robert Peel to remain contented for the last 20 years of his life with representing the borough of Tamworth.‡

In his defensive speech before the election of 1780, in speaking of the complication that had arisen through English and Irish difficulties as well as that of the terrible American War, "the perpetual establishment of a military power in the dominions of this crown, without the consent of the British legislature," he exclaims in reference to the national abasement for legislative errors, "a sudden light broke in upon us all. It broke in, not through well contrived and well disposed windows, but through flaws and breaches, through the yawning chasms of our ruin. We were taught wisdom by humiliation." With respect to Catholic relief he remarked, "I find with satisfaction and pride that not above four or five in this city (and I dare say these misled by some gross misrepresentation) have signed that symbol of delusion and bond of sedition, that libel on the national religion and English character, the Protestant Association."

"And now gentlemen," he concludes, "on this serious day, when I come, as it were to make up my account with you, let me take to myself some degree of honest

* Burke's Speeches of Burke, xv. † Ib. ‡ Ib. xvi.

pride on the nature of the charges that are against me. I do not here stand before you accused of venality or neglect of duty. It is not said, that in the long period of my service, I have, in a single instance, sacrificed the slightest of your interests to my ambition, or to my fortune. It is not alleged, that to gratify any anger or revenge of my own, or of my party, I have had a share in wronging or oppressing any description of men, or any one man in any description. No! the charges against me are all of one kind, that I have pushed the principles of general justice and benevolence too far, further than a cautious policy could warrant, and further than the opinions of many men would go along with me. In every accident which may happen through life, in pain, in sorrow, in depression, and distress, I will call to mind this accusation and be comforted."

After Burke had finished his speech, the following resolutions were adopted :—

BRISTOL, SEP. 6, 1780.

"At a great and respectable meeting of the friends of Edmund Burke, Esq., held at Guildhall this day, the Right Worshipful the Mayor in the chair.

("Resolved, that Mr. Burke, as a representative of this city, has done all possible honour to himself as a senator and a man, and that we do heartily and honestly approve of his conduct, as the result of an enlightened loyalty to his sovereign, a warm and zealous love to his country, through its widely extended empire ; a jealous and watchful care of the liberties of his fellow-subjects ; an enlarged and liberal understanding of our commercial interests ; a humane attention to the circumstances of even the lowest ranks of the community ; and truly wise, politic, and tolerant spirit, in supporting the National Church, with a reasonable indulgence to all who dissent from it ; and we wish to express the most marked abhorrence of the base arts which have been employed, without regard to truth and reason, to misrepresent his eminent services to this country.

“Resolved, That it is the earnest request of this meeting to Mr. Burke, that he should again offer himself a candidate to represent this city in Parliament, assuring him of that full and strenuous support which is due to the merits of so excellent a representative.”

The tide of bigotry and prejudice were too strong for him, and Burke retired from the election on the morning on which the polling was to begin. One of the candidates had died suddenly, and the allusion to the solemn event in Burke's farewell address contains a terse homily on the vanity of human wishes, that has long served for a standard quotation. “I have served the public,” he says, “for fifteen years. I have served you in particular for six. What is passed is well stored. It is safe and out of the power of fortune. What is to come is in wiser hands than ours, and He, in whose hands it is, best knows whether it is best for you and me, that I should be in Parliament or even in the world.”

“Gentlemen, the melancholy event of yesterday reads to us an awful lesson against being too much troubled about any of the objects of ordinary ambition. The worthy gentleman, Mr. Coombe, the candidate who has died suddenly, and who has been snatched from us at the moment of the election, and in the middle of the contest, whilst his desires were as warm and his hopes as eager as ours, has feelingly told us *what shadows we are, and what shadows we pursue.*”

Two or three letters in Burke's published correspondence are concerning a mysterious attempt to reduce the city and the shipping to ashes, the agency proving to be that of one man, John Aitken, otherwise known as John the Painter. Early on a morning in January 1777, the *Savannah*, a vessel bound for Jamaica

was seen to be in flames. On board the *Fame* another ship lying near, a quantity of combustible substance was soon after discovered. A like attempt was intercepted on board the *Hibernia*. Then a druggist's warehouse in a lane in Corn Street was found broken open, and combustibles therein placed with a match attached, which had been ignited but had gone out. Soon after six warehouses were burnt down in Bell Lane, together with the Bell Tavern in Broad Street. Directly after, a fire burst out in three different places of the city at the same time, and the train of inflammable materials had been so subtly laid, that had it not been speedily discovered, and the communication severed, the flames would have extended and caused infinite destruction of property. It was at first thought that an organised conspiracy of American origin was in operation, and a reward of £1000 by Government, and £500 by the city, was offered for the detection of the conspirators. It was not long before the incendiarism was found to be centred in one villain, by the apprehension through the vigilance of Sir John Fielding, of John the Painter. This miscreant confided to a pretended friend who had been purposely employed to worm out his secret, that he had been encouraged by one Silas Deane to set fire to the English shipping, on behalf of America. His guilt being clearly evidenced he was condemned to death, and hung at Portsmouth, the scene of other of his incendiary exploits.*

A tragedy of another character was the Bristol Bridge riot of 1793. This outbreak was caused by the

* Annual Register, 1777. Gent.'s Mag., 1777. Horace Walpole's Last Journals, II., 100. Burke's Correspondence.

maintenance of a toll that according to popular impression was to cease on the 29th Sept. The Commissioners, asserting that the expenditure was not yet met, leased out the tolls for another year. The populace thereupon assembled in refractory mood, broke down the gates and sacked the toll houses. A party of about 50 of the Hereford militia, headed by Col. Lord Bateman, proceeded towards the spot. After an ineffectual attempt to induce a quiet dispersion the soldiers fired; twelve persons were killed on the spot, and 33 were carried wounded to the Infirmary, besides many to their own houses. "It is not possible to say how many died on the whole, probably not fewer than forty."*

These riots were a mere local accident, and without the broad principle of the "Bristol Revolution" of 1831, as it has been magniloquently termed, which affected to have a political character for its basis. No doubt the popular feeling against the Tories for their opposition to the Reform Bill acted as the first incentive to the latter outbreak, or rather outrage. But the brutal passions of the mob are unhappily stronger than their patriotic feelings, and when these passions, wildly broken loose, were suffered to act uncurbed by the power of external authority, the cry of "Reform" was speedily changed to the cry of "Havoc," and the dogs of war were instantly slipped against the rights of property. The most disastrous of all weakness is the weak administration of civil law, and owing to the temporary paralysis, or possibly humane forbearance, of both civil and military dictatorship, an important section of the city was laid in ashes by the dregs of the

* MS addition to Newcome, Evans, 300.

populace. The rabble would not have proved wolves, had their proper rulers not seemed sheep. Had magisterial action been suspended 30 days instead of only during three, all Bristol would have been burnt to the ground. What remained of half of one of the most spacious quadrangles of houses in Europe was a heap of smouldering and dangerous ruins. While women and helpless children, naked, homeless, and terrified, were flying from the dreadful spot, where they had so lately enjoyed their own fire sides ; and while lawless ruffians, madly drunk with the choice wines they had stolen from the richly stocked cellarage of the Mansion House, were continuing to set fire to dwelling after dwelling, the military were restrained from charging the mob, and their commander was shaking hands with the rioters in the vain hope to conciliate and subdue them by the "power of kindness."

Forty-one spacious houses in Queen Square were consumed, besides four toll houses, the Bridewell, Gaol, and Lawford's Gate prison, and the Bishop's Palace. The reflection of the fires on the horizon was seen at the distance of forty miles from the city, and in some places it was sufficiently light at a distance of seven miles to pick up a pin upon the ground.

The delirium of destruction lasted from Saturday to Monday morning, when at three o'clock the Mayor sent peremptory request to the chief officer of the soldiers to quell the riots at any cost. The Fourteenth Dragoons thereupon spread across Queen Square the focus of the devilish revels, and picked out the rioters, about 10 or 12 of whom were cut down round the statue of King William III. The troops followed the flying mob over the town. In

Marsh Street a man who attempted to seize the bridle of one of the dragoons had his head completely severed from his shoulders, and in Castle Street likewise, where the skirmishing was hot, a powerful man who had been actively cheering on the rioters, was singled out by a private, who with a back-handed blow cut off his head. Those who had still heads to save endeavoured to save them by shrinking from the streets into the lanes and passages where were their houses. There was no further temporizing on the part of the military or the civic authorities, and the Bristol Riots were stayed.

It is impossible to say how many perished in all during the "Reign of Terror." The list of killed and wounded as subsequently made out was, killed 12, wounded 96; this list, however, included only those who were taken to the hospitals, those killed and burnt while engaged in plundering the houses being unascertained. From time to time heads without bodies, trunks without members, and fragments of limbs were successively exposed to public gaze.

Four of the rioters were hanged, and the unfortunate Col. Brereton committed suicide.*

The amount of compensation for damages, was fixed by the Parliamentary Commissioners and assessed on the citizens, amounted to £68,208 1s. 6d.

Leaving this disgraceful epoch of Bristol history we will touch upon some points of the material improvements of the present century, as contained chiefly in the works of the civil engineer.

* Trial of Chas. Pinney. Curiosities of Bristol. Trial of the Rioters. Felix Farley's Journal. United Service Journal. Thornbury's Old Stories Retold.

The canal known as the New Cut, a channel nearly three miles long, with the two capacious basins, the Cumberland and the Bathurst, were commenced in 1804, and completed in 1809. The floating dock covers an area of 82 acres, and the entire work cost £600,000.* Steam communication was established between Bristol and Ireland as early as 1826; and to Bristol belongs the honour of being the first port in the Kingdom that established a regular steam communication with the United States, the first voyage having been performed by the *Great Western* steamship in 1838. This vessel was built at Bristol at a cost of £60,000, and the *Great Britain* and the ill-fated *Demerara* were also cradled here, the former costing £120,000.†

Although the *Great Western* was the first steam vessel that made regular voyages between Europe and America, the first attempt to use steam in the direct voyage across the Atlantic was made by the *Savannah*, an American ship of 300 tons burden, and built at New York. She made only two voyages to and from Europe. In the first of these she left the port of Savannah on May 25th, and anchored at Liverpool on June 20th, 1819.‡

While touching upon the part taken by Bristol in promoting traffic over the great water way of nations, we may add that the improvement of intercourse between place and place at home was also largely encouraged by the development of a system of road-making worthy of a civilized people, which special system took its rise in the neighbourhood of the

* Will. Webster, Cassell's Technical Educator, iv., 46.

† *Ib.* ‡ Brunel's Life of Brunel, 232.

present city. Mr. John Loudon McAdam having for many years directed his attention to the better construction of roads, and as surveyor (appointed 1816) of an extensive trust round Bristol, the admirable state of repair to which the turnpike ways under his direction were brought, attracted very general attention. Before his time it was customary to repair highways by shooting almost any kind of loose rubble upon the surface, but MacAdam's plan of depositing layers of small stones upon the road, to be worked into solidity by the traffic, has since been adopted over the country, and has given his name to the new system. He was rewarded by a Government grant of £10,000, but declined the honour of knighthood, which was awarded to his son.*

Quantum lenta solent inter viburna cupressi, "like shrubs when lofty cypresses are near," the (one time) second city of England now stands, not only in relation to the first, but to several modern towns that have outstripped her in magnitude of population and in material development; but even our rapid sketch is enough to show that in the great cause of national advancement Bristol has represented no unworthy part. We have seen that to her learned son Grocyn English scholarship owes the introduction of the stately language of Homer, which until his time was unknown in the schools. To Sebastian Cabot, another native, is due the fact that English is the tongue spoken on the great North American continent. In William Worcester we have the first home traveller, a sort of English Pausanias, who walked about the walls, studied the castles, abbeys, and churches, and almost counted the stones in the streets of the old historical land of his birth, and has left us records of

* Mc Adam's "Road Making," Knight's "Cyclop. Biog."

what he saw. To him we owe the most complete nomenclature of mediæval architecture, which valuable vocabulary has been edited by Prof. Willis. The princes of Bristol were merchants. We may add that the merchants of Bristol were princes, and we need only point to such noble monuments of the aristocracy of wealth as Redcliff Church and St. Stephen's tower, the works of her great traders, Canynge and Shipward. We have touched upon her spirit for colonization abroad; her deeds of charity within the city; her schools, hospitals, and almshouses are too numerous to be mentioned; but Colston, Whitson, and Reynolds, belong to the best type of philanthropists. A Bristol ship brought home the hero of Juan Fernandez, and De Foe's stirring romance was the result. To the encouragement afforded by a Bristol bookseller the first literary efforts of Wordsworth, Southey, and Coleridge were given to the world, which incipient works were published here. Chatterton was indeed a "marvellous boy," and had he not "perished in his pride" might have proved a still more marvellous man. In Edmund Burke, Bristol was represented by perhaps the grandest statesman of modern days. To eminent names we might add those of such native artists as Sir Thomas Lawrence, Bird, and W. J. Müller, the biography of the latter of whom has just appeared in a sumptuous volume.

Though Bristol has always been a city of churches, it has never been potentially an ecclesiastical town, such for example as Glastonbury or Wells. In these and kindred boroughs the central power was vested in the spiritual lord, but in Bristol there was no sovereign Abbot or Bishop, and the churches and monasteries,

having no joint corporate jurisdiction, were individually too weak to usurp the force of the secular arm. After Bristol, therefore ceased to be a barony and appanage to the crown, it became self-dependent, self-contained, and self-governed. As a seaport and commercial city it has flourished in consequence, rather than in spite of the departure or absence of the temporal or spiritual baron ; and has shown the might of labour and commerce by extending its limits ten times beyond its original compass in Saxon times.*

* It original site was between St. Nicholas Church, south ; St. John's north ; St. Peter's east ; and Stuckey's Bank west. These points give the extent of the first walled Saxon town. E. W. Godwin, Som. Arch. Proc., vol. 14, p. 24.





Architectural Antiquities.

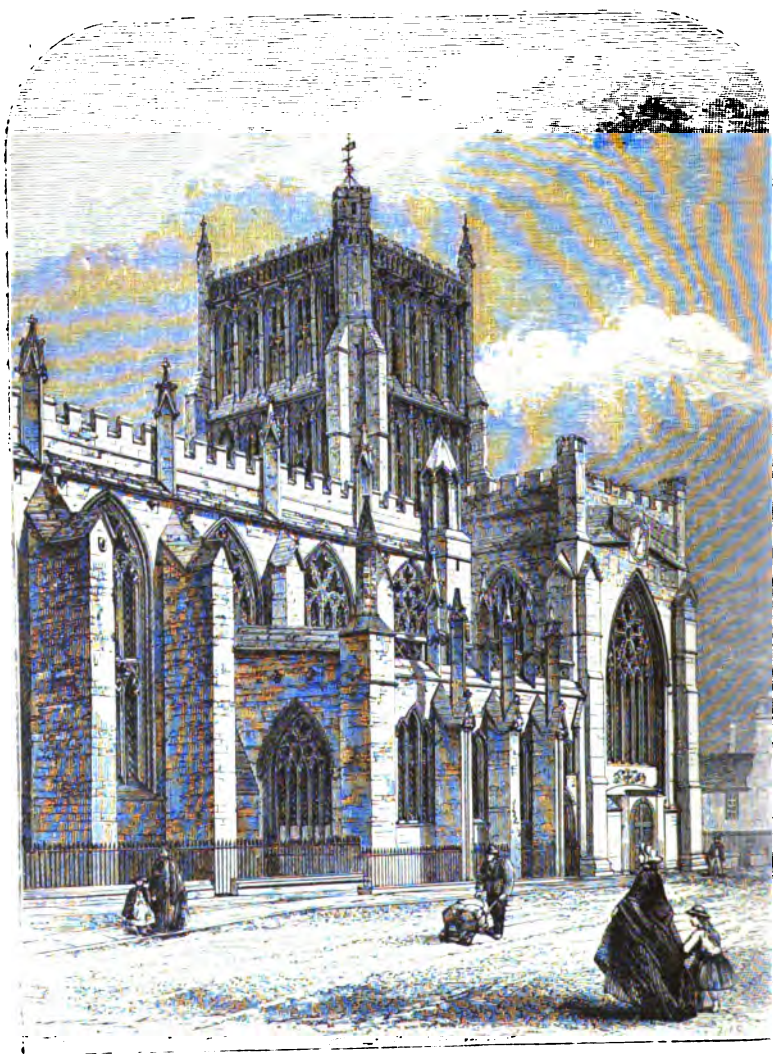
SECTION II.

SYNOPSIS.

ANGLO-NORMAN.—West Front, Clerestory, and massive Nave of St. James's Priory Church ; Tower of St. Peter's Church ; two western bays of All Saints' Church ; Font in St. Philip's Church ; Great Gateway, Lower Gateway, Chapter Room, and other remains of Fitzharding's Abbey of St. Austin, now the Cathedral. *Domestic*—Portions of the present Law Library in the New Assize Courts.

EARLY ENGLISH.—Inner North Porch of Redcliff Church ; Tower of St. Philip's Church ; Chapel of the Priory of St. Mark ; double Gateway with intervening Arcade of St. Bartholomew's Priory, Christmas Street ; Elder Lady Chapel &c., at the Cathedral ; Part of the Dominican Friary, Merchant Street ; Vaulted Chamber of the Castle in Tower Street ; Arch of the Old Town Gate, called Blynd Gate, at the end of John Street ; Hermitage, St. John's Lane, Redcliff Hill.

DECORATED WORK.—Chancel and North Chapel of Temple Church ; Portion of the Dominican Priory, Merchant Street ; Portion of the Priory Church of S. Mark ; Chancel, &c., of Cathedral ; Hexagonal North Porch, &c., of St. Mary Redcliff. *Domestic*—Groined Vault, No. 22, High Street ; some Timber construction, opposite S. Peter's Church.



BRISTOL CATHEDRAL, NORTH EAST.

PERPENDICULAR WORK UP TO THE 16TH CENTURY.— St. Nicholas Crypt ; St. John's Church, Crypt, and Gate ; chief Part of All Saints' Church ; St. Werburgh's Tower and Part of Church ; St. Mary-le-Port Church ; Tower of St. Thomas' Church ; Portions of St. Philip's Church ; Tower of St. James' Church ; Main Structure of St. Peter's Church ; Tower of St. Stephen, and great part of the Church ; whole of St. Augustine's Church ; some part of the Abbey of St. Augustine and Priory of S. Mark ; Nave, Aisles, and Tower of Holy Cross or Temple Church ; Chapel of Three Kings, top of Christmas Steps : nearly the whole of St. Mary Redcliff Church. *Domestic*— Vaulted apartment of Castle, Tower Street ; Grand Window of Colston's house, incorporated with New Assize Courts ; portions of Old Swan Inn, Mary-le-port Street ; Gateway of Guard-house Passage, Wine Street ; Canynge's house, Redcliff Street ; Norton's house, St. Peter's Churchyard ; Barstaple's Almshouse, Old Market Street ; Calendars' house, south west angle of All Saints' Church.

THE CATHEDRAL.



THE Abbey of St. Augustine Black Canons, the Church of which now forms the Cathedral, was founded in A.D. 1142 by Robert Fitzharding, a burgess of Bristol, and progenitor of the noble family of Berkeley. At the period of its erection Prince Henry, afterwards King Henry II., was receiving his education in Bristol, and the inscription over the great gateway denotes his interest in the work while in procedure. This interesting fact is confirmed by an *inspeximus* made by Edward II. of the charter of Henry II., the latter therein speaking of the Abbey of

S. Augustine as "that which from his early boyhood he had aided and encouraged by benefactions."

The Church was consecrated on Easter Day, 1148, in the presence of the Bishops of Worcester, Exeter, Llandaff, and St. Asaph.

The only considerable portions of Fitzharding's structure that exist are the curiously enriched Chapter Room with its columnar vestibule, the Great Gateway, and the Gateway to the Abbot's house in the Lower Green. Judging from these remains the earlier Church would have been an imposing structure and calculated for unlimited duration. Why therefore it was rebuilt within two centuries of its erection seems not easy to explain, seeing that we have no record of fire or other accidental agency in its destruction to incur the necessity of another fabric. If Mr. Street's interpretation of the original nave, however, be accepted, that this important member of the church consisted simply of external walls ($5\frac{3}{4}$ feet thick) undivided by aisles in the interior, and therefore without columns and arches, it may be understood that the severity of the building in general was such that the æsthetics of the 14th century taste in architecture would hardly tolerate; hence its demolition and the commencement of a new edifice "with long drawn aisles and fretted vault," that the zeal of our own day is bringing to completion. This inference receives confirmation in the fact that the early English Lady Chapel on the north side was an adjunct to the Norman Church, but was spared, no doubt for the sake of its beauty and closer assimilation to the yet more advanced style that was adopted to supersede the crudeness of Fitzharding's structure.

We will now proceed to consider the building more

in detail, Entering a debased doorway (the work of Abbot Somerset 1526-30) at the north end of the transept we find immediately to the left the "Elder Lady Chapel" just adverted to. This is so called to distinguish it from another and later chapel to the Virgin Mary at the south east end of the church, to which the Lady altar was removed after the rebuilding of the choir. This chapel is pure early English, and from certain indications supplied by the bold sections of the mouldings, Mr. Godwin attributes its erection to John the third Abbot who ruled the monastery from A.D. 1196 to 1215. In each of the four bays that divide the chapel is a triplet window of the usual lancet form. The east window and wall are early Decorated, and together with the groined roof are assigned to Abbot Dodington, who died in 1294. The grotesque character and forcible execution of the sculpture in this chapel deserve attention, and generally obtain it.

The choir consists of five bays, beyond which is the chancel of two bays. The whole of this work was begun and nearly completed by Abbot Knowle, between 1306 and 1332, and belongs to the early or Geometrical Decorated period. By the obviously symbolical arrangement of the tracery of the great East window as well as by the three compartments of the reredos beneath, we are reminded of the dedication of the church to the Holy Trinity. The richly hued glass, "like an inestimable treasury of precious stones, and with all its brilliancy as soft as rose leaves,"* is among the best in England. It dates, according to Mr. Winston, from about the year 1320, but when

* Hawthorne's Eng. Note Books, ii., 220.

restored in 1847 much modern glass was inserted; the old work is, however, discernible from the new by the difference of tone. The window represents a stem of Jesse. The lower lights contain figures of the Virgin and Infant Jesus, as well as prophets and kings. In the three upright lights above are the crucified Saviour, the Virgin Mary, and St. John the Evangelist. The four side windows of the chancel contain glass of the same date and character as that of the east window. These have been restored and re-arranged by Bell of Bristol.* The enamelled windows on the east of the north choir aisle are traditionally said to have been presented to the Cathedral by Nell Gwynne. The tradition is at least as old as Horace Walpole, who in mentioning his visit to this church in 1776, without hesitation declares them to be her gift. The beautiful stone altar screen beneath the east window is of the florid pointed style of the 15th century. It consists of three ogee arches with a niche between each. The whole work was restored in 1840, when the central arch was constructed, the original having been superseded by a wooden altar screen. The modern altar table is of carved wood. The sedilia, four in number, are modern, but copies of the ancient,† and with their rich canopies of leafage supported by red serpentine shafts, are of great beauty.

The tower, 127 feet in height, is a rich specimen of Perpendicular design, and was the work of Abbot Newland (1481-1515), or of his successor Elliot (1515-1526). Both the tower and the transept occupy the exact site of the same members of the Norman Church, much of the original walls of the transept being con-

* Murray's Cathedrals, 151. † Ib.

tained in the present structure. The tracery of the window in the north end of the transept was inserted in 1704.* The running line of masonry below the early English jambs of this window is Norman. At the north east angle of the same end of the transept, above the Elder Lady Chapel, is an early English pinnacle which is a "good example of a date anterior to the general adoption of the pinnacle in construction."†

In the south arm of the transept is a round-headed gable window and other features of Norman date. In the western wall near the present cloister entrance to the Cathedral is a blocked up doorway that formed the temporary entrance to the original church‡ (A.D. 1148). Inside the transept a Norman corbel may be seen supporting the later capital of the Perpendicular vaulting. The windows have Perpendicular glazing c. 1481. A staircase leads from this wing to what was formerly the Dormitory. On the left, at the head of the time-worn steps, is the Bishop's Court Room, where many a culprit has been made to condone some offence against morals by doing penance in a white sheet before the congregation in the body of the Cathedral.

The arch opening to the south choir aisle is Decorated (1332-1341) as is that of the north aisle of the choir, but the latter is later in character (1481-1515) and formed part of Abbot Newland's work, who also constructed the groined roof of the north transept, and the arches now closed, which were intended to open to the nave aisle. The vaulting of the south transept is assigned to Abbot Elliot (1515-1526).§

The lower part of the tower piers, according to Mr.

* Walcot's Mem. of Bristol, 24. † Godwin.

‡ Godwin, 44 ; Murray, 142 ; Walcot, 42. § Murray, 143.

Godwin, is in fact Norman. The piers he considers to be substantially Norman, but cut away to their present form.

The Berkeley Chapel attached to the east end of the south aisle was founded in 1348 by Thomas Berkeley for the soul of his wife, who died in 1337, the shields of whose family are carved over the entrance. One of the ogee niches in the vestibule to this chapel has a chimney which was used in pre-Reformation days for baking the sacramental wafer. The chapel and vestibule are Decorated in style. Two of the windows are embellished with ball flowers. The Newton Chapel at the west end of the south aisle is like-wise Decorated, and is the reputed work of Abbot Snow (1332-1341).

The general effect of the interior of the church is that of breadth rather than height, but there is nevertheless a fine sense of proportion in the relations of parts. The clustered piers have triple shafts, from the graceful leafage of the capitals of which springs the ground vaulting of both the choir and aisles, but the groining of the chancel springs from shafts attached to the walls.

The chief speciality of the church is the uniform height of the vaulting, the central and the two side aisles, though different in construction, being at their highest points exactly at the same elevation from the ground, a peculiarity it is said not to be elsewhere observed.

The Chapter House with its pillared vestibule exhibits some most interesting Norman work of advanced or transition date. The arches of the latter spring from clustered columns with cushioned capitals, and



BRISTOL CATHEDRAL, THE CHAPTER HOUSE.

are studded with nail-head ornaments.* The room is singularly enriched with zigzag, trellis and other mouldings on the wall arcades and groined ribs of the vaulting. In the year 1831, on taking up the flooring, twelve stone coffins were discovered, supposed to contain the remains of the same number of Abbots. In the vestry is a rudely sculptured Norman slab that formed the cover to one of these coffins. At the south-west corner of the cloisters is a fine Early English doorway that communicates with the Refectory.

In Lower College Green is to be seen the ancient archway to the Abbot's lodgings. This is earlier in date, and less ornate in construction, than the grand gateway of the abbey above. The latter is worthy of all admiration for massive grandeur and intricate workmanship. "Take a walk to the College Gate," says Chatterton, "view the labyrinth of knots which burst round that mutilated piece, trace the windings of one of the pillars and tell me if you do not think a great genius lost in these minutiae of ornaments." The superstructure of the arch is assigned to Abbots Newland or Nailheart, and Ellyot (1481—1526) whose statues occupy two of the niches on the southern side, their arms being beneath. On the northern side are statues of Henry II. and Robert Fitzharding. The inscription over the crown of the arch on this side is as follows, "*Rex Henricus secundus et Dominus Robertus filius Hardingi filii Regis Daciæ hujus monasterii primum*

* Owing to the liberality of John Murray, Esq., the eminent publisher, we are able to present three views of the Cathedral, of superlative merit, that have appeared in the "Handbook of Western Cathedrals."

fundatores extiterunt." (King Henry II. and Robert son of Harding, who was a son of the King of Denmark, were the first founders of this monastery). The picturesque character of this fine gateway has been impaired by the removal of the ancient bay windows, and the substitution of the present miserable sashes.

The principal dimensions of the Cathedral are:—entire length of the old structure 174 feet, width 68 feet, height 51 feet, tower 127 feet high. The new nave will be 117 feet in length.

It is one of the six new Cathedrals constituted by Henry VIII. out of the revenues of the dissolved religious houses. The foundation charter is dated June 4th, 1542. The Bishop and Canons took possession on 14th August, and "were worthily received."* In 1836 Bristol and Gloucester were united in one diocese. The Cathedral underwent an extensive restoration in 1861, at a cost of £12,000.

· MONUMENTS.

Berkeley Tombs.—The following supplies a complete list as far can be ascertained, of members of the noble family of Berkeley interred within these sacred walls.

The earliest was Robert Fitzharding, the founder of the monastery, at whose funeral the church was hung with black, appearing like a huge hearse. He died in the year 1170, and lies with Eva, his wife, under a flat stone at the entrance to the choir;—not in the great tomb adjoining the Elder Lady Chapel, as erroneously affirmed by the modern inscription affixed to that monument.

Robert de Berkeley, eldest son of Maurice I. and

* MS. Calendar in Bristol Library.

grand-son of Robert Fitzharding, is buried in the north aisle, "over against the high altar, in a monk's cowl.*" He was one of the barons who rebelled against King John, for which, and repeated acts of disloyalty, he was excommunicated by Innocent III., and his castle of Berkeley and all his lands confiscated, and assigned for the maintenance of Bristol castle. These however were restored to the family on the accession of Henry III. He died in 1219.

The next of the same family interred here is Thomas, brother and heir of the above Robert. His death occurred in 1243, and he is buried in the south aisle, that is, in the Decorated recess situated in the third bay from the east.†

Maurice, his son and heir, accompanied his father in the wars of France. He had three sons, of whom the eldest was killed at a joust held at Kenilworth in 1277, whereto 100 well armed knights proceeded with "as many ladies going before singing joyful songs." This Maurice is usually said to be buried in the south aisle in the fourth recess from the east, but both Dugdale and Collins, who quote the "Great Cartulary" deposited in Berkeley castle, assert him to be buried in the north aisle.

Under an arch between the vestry and the south aisle is an altar tomb in memory of the second Thomas Lord Berkeley, son of Maurice, the second of that name, and great-grand-son of Robert Fitzharding. At the outbreak of the barons' wars he sided with Henry III., and was with him at the siege of Kenilworth. "He was much skilled in running at the ring, with other hastilude or spear plays, and his elder years were

* Collins' Peerage, III. 566, Dugd. I. 352. † Collins, iii., 566.

exercised at jousts and tournaments." He found sterner occupation however at the battle of Bannockburn, where he was taken prisoner. His death happened in 1321. He was twice married, and with him are here sepultured his successive wives. The shields annexed are charged with coats of the Berkeley, Ferrers, and de Quincey families, the two latter being the families to whom his wives were related.

Maurice, fourth Lord Berkeley of that name, lies with Elizabeth, his wife, within the great tomb situated between the choir and Elder Lady chapel, and which on the erroneous authority of the modern inscription is assigned to Robert Fitzharding. This Maurice was a son of the third Thomas Lord Berkeley, who was concerned in the death of Edward II. He was married at the premature age of eight years to Elizabeth, daughter of Hugh Despenser. At the battle of Poitiers he received wounds from which he never recovered. He died in 1368. With him, in this tomb is also buried his mother Margaret.

Sir James, the second son of the fourth Maurice, died in 1404, and is buried in his father's tomb, being as is stated, that against the Lady chapel under the arch.

The last baron Berkeley here interred, was Thomas, the fifth of his name. He figured at the battle of Flodden in 1513. His death took place in 1532, and by the ordination of his will, he was first buried at Mangotsfield, and shortly after removed to the Abbey at Bristol, and buried near Eleanor his first wife. The identity of his tomb is uncertain, but he probably lies within one of the ornamental recesses that are without effigies, in the north aisle.

The carved canopies adverted to are very peculiar and beautiful. One of these, that on the north side of the extreme end of the chancel, contains the effigy of Abbot Knowle the refounder of the church. He died in 1332.

Many monuments of prelates are distributed about the church. One exhibits an emaciated effigy, commemorative of Paul Bush, the first Bishop. Another of more interest is that to the memory of Bishop Butler, author of the "Analogy." Of other remarkable memorials may be mentioned that to the wife of the poet Mason, with its famous poetical inscription, "Take holy earth, all that my soul holds dear." Also the carved mural monument by Bacon, to Mrs. Draper, the Eliza of Sterne. Lady Hesketh, the friend of the poet Cowper, is here buried, in the southern transept, at the entrance to the aisle. A monument by Chantrey, to Dr. Crawford, and another to Mrs. Elwyn may likewise be observed.

Of English Sovereigns who have visited St. Augustine's Abbey or Cathedral, can be mentioned Edward I. in 1284, Edward IV. in 1474, Henry VII. in 1486, Queen Elizabeth in 1574, Anne of Denmark, Queen of James I. in 1613, and Charles I. in 1643, who was accompanied by the heir apparent, afterwards Charles II. Archbishop Cranmer preached within these walls in 1534.

After an interruption of four centuries, this beautiful church is once more possessed of a nave, it being hitherto the only Cathedral in the kingdom deficient of that important architectural member. The total amount of subscriptions received and promised towards this grand work which is now approaching comple-

tion, is about £41,200, and the total expenditure to the present time is about £39,150.

The daily service at present is at ten in the forenoon and four in the afternoon, and on Sundays at 10.30 and 3.30. In the 17th century worship was commenced as early as six in the morning on Sundays and holidays. In Archbishop Laud's "metropolitical" visitation in 1634 to the enquiry whether "Divine Service be used and the Sacraments administered in due time and according to the Book of Common Prayer, by singing and note according to the statutes of the Church?" it is answered in the affirmative; with the explanation that the Litany being said every Sunday and holiday morning at six o'clock prayers, is not usually sung again at ten o'clock prayers for want of a full quire, some of the singing men being clerks of parishes or organists in the city.*

The six o'clock morning service was maintained in the 18th century. This fact we incidentally discover by a statement of Thomas Olivers, an early Methodist preacher and author of the fine hymns "The God of Abraham praise," and "Lo He comes with clouds descending," who speaking of his visit to Bristol, and conversion to a new life by the powerful preaching of George Whitefield, proceeds, "The first Sunday after I was awakened I went to the Cathedral at six in the morning. When the *Te Deum* was read, I felt as if I had done with earth, and was praising God before His throne, &c."

"The orderly procession on week days," says the Rev. Prebendary Walcott, "juniors going first, was commenced at Bristol, and on Sundays at Canterbury,

* Hist. MSS. Com. Rep. iv., 141.

where the verger precedes the clergy, and not the Dean and Chapter. At Bristol the capitular members intervene between the lay clerks and chorister; at St. Paul's they form three separate processions, which merge into one under the dome. At Durham, and in most Cathedrals, the choristers and clerks walk two and two, and the clergy singly."*

ST. MARK'S CHURCH.

St. Mark's, or the Mayor's Chapel, was originally the church of the Hospital of Bon-hommes, of which order there were only two other houses in England. St. Mark's Hospital was founded by Robert de Berkeley, the second Lord of Berkeley, and finished by Maurice de Gaunt, his son, who died in 1230.

The hospital was placed under the control of the Canons of St. Augustine's Monastery, and was ordained for the maintenance of a chaplain, and the daily relief of 100 poor; but twelve scholars were afterwards admitted on the foundation. These wore a red shield on their habit during the year of probation, to which a white cross was afterwards added. The house was dissolved in 1534, and in 1540 the estate was granted from the Crown to the Mayor and Burgesses of Bristol for public uses.

The chapel was restored in 1829. It lies nearly north and south, instead of the usual position. The general effect of the interior is very impressive. The emblazoned roof, rich fretwork stalls of dark oak, carved tabernacles, the ancient tombs with their sculptured canopies, the sombre illumination derived from the traceried windows glowing with images of saints and martyrs, fill the mind

* Traditions and Customs of Cathedrals, p. 76.

with a kind of æsthetic awe and devotion, not unmixed with a pleasing melancholy.

The building is of mixed architecture. On the north and south sides is a range of grotesque corbels of Early English character, and some of the windows are of the same style, but somewhat advanced. The great west window is a combination of the Decorated and Perpendicular styles. The head is a wheel of twelve spokes, which, together with the rest of the tracery, is modern, but a reproduction of the old work. In the side aisle is a pure Decorated window, enriched with ball flower ornament. The tower was finished in 1489. The east end of the church, with its fine altar piece of late Perpendicular niches and tabernacles, is asserted to have been reconstructed by Miles Salley, Bishop of Llandaff, whose tomb is conspicuous on the south side of the altar. He died about 1516. On the right side of the altar are four fine sedilia, and in the centre is a painting of the "Dead Christ," by King, of Clifton.

The greater part of the glass in the chapel was, says Mr. Winston, "I believe brought from Mr. Beckford's house at Fonthill." That of St. Thomas-a-Becket, in the south aisle, was purchased thence, having previously cost the owner 280 guineas.

The vestry, with its roof of fan tracery, and walls encrusted with niches, was formerly a chauntry of the Poyntz family, of Iron Acton. It dates from 1510 to 1520, and is a fine specimen of Perpendicular.

In the north-west corner of the dim side aisle is a Hagioscope.*

* There has been much dispute concerning the full intention of these perforations. That they opened a view of the high altar or of

One of the oldest monuments in the church is that to Sir Henry Gaunt, the first master of the Hospital, whose much worn effigy is recumbent on a panelled tomb, in the south aisle, bearing the date 1268. The tomb, however, is of later date than the figure.

A low altar tomb, with the initials J. C., is said by Barrett, who is followed by Pryce and others, to be to John Carr, one of the founders of Queen Elizabeth's Hospital. This, however, is a mistake, for he was buried at St. Werburgh's, as the MS. records of that church show.

The two cross-legged effigies in chain mail, now in the east chapel of the same aisle, are believed to represent Maurice de Gaunt and Robert de Gournay, the founders of the hospital. The first of these, however, was buried at the Blackfriars, in Rosemary Street. Other memorials are an Elizabethan monument to William Birde, died 1590; a recumbent effigy in plate

some altar, is evident in every instance, but whether the persons who used the openings to observe the elevation of the host were under ecclesiastical censure, and in consequence separated from the general congregation; or whether there was no speciality of purpose in their use, has not been decided. There is strong reason to believe, however, that the former of these two views is the correct one. When Bishop Pecock (1459) was deprived of the temporalities of Chichester, certain instructions were given by Thomas, Archbishop of Canterbury, how he shall be treated in Thorney Abbey. "First:— It is thought convenient that the said Reginald shall have a secret closed chamber within the abbey aforesaid, where he may have sight of some altar to hear a mass; and that he pass not the said chamber. *Item*, that the said Reginald shall have no book to look on, but only a Portuor (Breviary), a Mass Book, a Sautler, a Legend, and a Bible. *Item*, that he have nothing to write with, no stuff to write upon, &c."—*Dublin Review*, Jan. 1875, p. 35.

armour to Sir Richard Berkeley, died 1604; a curious statue of a youth kneeling on one knee, &c.

Under a richly-carved canopy, on the north side of the chancel, is a finely sculptured figure of Miles Salley, Bishop of Llandaff, who died 1516; and adjoining is an altar tomb, with effigies of Sir Thomas Berkeley, of Stoke Gifford, and Catherine, his wife. He died in 1360, but the tomb belongs to the early part of the 15th century.

At the College Green entrance the visitor passes over the remains of Capt. Tho. Bedloe, of the "Popish Plot" notoriety. He died in 1681.

ST. AUGUSTINE'S THE LESS.

This church was originally built by the canons of the adjacent monastery, and was intended as a chapel for the neighbouring inhabitants. The earliest mention is in A.D. 1240, but the present edifice dates from 1480. During the latter half of the last century it underwent alterations, which included an elongation of the aisles. The whole of the church, except modern pinnacles and other restorations is of the Perpendicular style. The tower is of three stages, and of pleasing design.

In the churchyard may be seen the inscribed tomb of Mrs. Marianne Smith, who was poisoned by the fiendish Mrs. Burdock.

ST. STEPHEN'S CHURCH.

The body of the present church was built, between 1450 and 1490, at the joint expense of the parishioners and the Abbot of Glastonbury, to the latter of whom the living belonged. The tower was erected by the sole munificence of John Shipward, a wealthy merchant,

who was Mayor of Bristol in 1455. It is 133 feet in height, and is generally allowed to be one of the handsomest parish towers in England. Its founder is buried within the walls of the church, and this magnificent trophy over his urn, like Absalom's pillar in the king's dale, reared up in his lifetime, is a peerless monument to his memory. The openwork turrets have been recently rebuilt, in pursuance of a partial restoration of the church.

The nave and chancel in the interior are divided on each side, from the north and south aisles, by seven uniform and finely proportioned moulded arches, supported by clustered columns, having capitals embellished with demi-angels holding unfolded scrolls. The roof is of oak, and strongly resembles that of the Mayor's Chapel, being flat, and divided into square compartments by deep moulded ribs, with rosettes at the intersections.

The whole of the windows of the clerestory and aisles contain impoverished Perpendicular tracery, and are modern, with the exception of two at the western end of the south aisle, which are far superior in character. What was formerly called "the great east window" has been blocked up to the height of the transome bar, to afford accommodation for the Grecian altar-piece. The roof of the south porch is filled with elaborate fan tracery, and there is some florid embellishment to the exterior.

Recessed in the south wall is an elaborately sculptured tomb, supporting a male and a female figure. This has been suggested to belong to John Shipward, but its style, Decorated English, indicates an earlier date. There being no inscription, it is impossible to tell

whom this monument commemorates. There is a detached effigy, also of uncertain identity, lying at the base of one of the western pillars of the south aisle.

There was formerly a chantry in this church to Edward Blanket, who, as well as two of his brothers, was largely engaged in the woollen trade in Bristol, and is said to have first introduced into England the manufacture of the coarse and comfortable woollen cloth now so well known by their name. Mr. Stiles, however, thinks that it is more likely that the blanket gave its name to the brothers.

ST. WERBURGH'S CHURCH.

The mediæval and architectural interest of St. Werburgh's Church now chiefly consists in its tower and north porch, the rest of the building, through being much decayed, and obstructing Small Street, having been taken down about the year 1760, and rebuilt with the curtailment of the chancel end. During the first 200 years of its existence, the church was without a tower, this important feature being added in 1385, and is, though it has undergone repairs, now substantially the same as when erected.

The whole of the structure is in the Perpendicular style, the tower being of four stages, of fine proportions, and presenting a good specimen of the Somersetshire type.

Among remarkable men who have occasionally filled the pulpit here, may be mentioned Bishop Fletcher, who attended Mary, Queen of Scots, to the scaffold; Bishop Trelawny, one of the famous seven; and of different mind to either of these, George Whitefield, John Wesley, Rowland Hill, and (20th June, 1848)

Robert Montgomery, the victim of one of Lord Macaulay's bitterest criticisms.

Among the monuments is the kneeling figure of Nicholas Thorn, with a wife on either side and several children. He was one of the founders of the Bristol Grammar School. "God send us many coppies of such Thorns," says old Fuller, "for he was a blessing to our nation." Also may be noticed a quaint monument to John Barker, Mayor, who died in 1607.

In 1796, the Sunday evening lecture of St. Werburgh was established, and Mr. Biddulph was appointed the first lecturer. This appears to have been the first evening service opened in a church in Bristol.*

ALL SAINTS' CHURCH.

The Church of All Hallow or All Saints is said by William of Worcester to have been founded before the Norman Conquest. This is perhaps doubtful, but the four cylindrical piers, at the western end of the nave, refer the earlier structure back to the Norman period.

The south aisle was rebuilt about the middle of the 15th century. The north, called Jesus' aisle, was rebuilt in 1782. The present tower was built in 1716. Eight new bells were cast for the church in 1728. The pulpit is very handsomely carved, and probably dates about the time of James I. Except the four Norman piers the interior of the church is in the Perpendicular or third pointed Gothic. These piers sustain, on the south side, what was once the vicarage, and was built by Thomas Marshal, Vicar and Calendar, in 1422. On the north-west end formerly rested the Library of the Fraternity of Calendars, whose chapel was the south

* *Felix Farley*, May 26, 1838.

aisle. These were a semi-religious fraternity, whose office it was to convert Jews, instruct youth, and keep the archives of the city. On every festival day (and holidays in olden time were not sparingly distributed through the year) free access was granted to all willing to receive instruction; and the prior, if duly required, was to lay open doubtful and obscure places of scripture to all that asked him, and read a public lecture every week in the library.

By the ancient office of the Mayor of Bristol, it was appointed that upon Allhallow's Day the Mayor and the Sherrif of Bristow were, after dinner, to assemble with the whole Council at the Tolsey, "with many other gentle and worshipful commoners, such as appereth there at that time, and from thence go in to All Hallowen Church, there to offer, and from thence to walke all in fere (company) into the Mayor's place, there to have their fires and their drinkings with spiced cake bread, and sundry wines, the cups merrily serving about the house; and from thence every man departing into his parish church to evensong."*

Among the chief institutions of mediæval ecclesiastical life was the yearly commemoration of those who had left money or goods to their parish church in order that masses might be sung for their souls' repose. Upon the eve of such anniversary the bellman or bedeman of the town took his station at the High Cross or at the head of the principal streets, and besought all people to pray for the mercy of God on the souls of those whose names he then proclaimed, and for whom Placebo, and Dirige, and lauds for the dead would be sung that day at church, with a mass of

* Ricart's Calendar.

requiem on the morrow, to be followed by a dole to the poor.* An ancient and singularly quaint and interesting manuscript book at All Saints' well illustrates this custom, and at the expensive sacrifice for once of our rule of brevity we are tempted to make a few extracts.

"The names of good doers and well wishers by whom livelihoods, tenements, and other goods hath been given unto y^e Church of All Hallown in Brystowe unto y^e honor and worship of Almighty God, and increasing of Divine service to be shewed and declared unto y^e paryshons on y^e Sunday before Ash Wednesday and at high mass, and yearly to be continued as followeth:—

"Where it hath been of a laudable custom of long continuance used, that on this day, that is to say y^e Sunday before Ash Wednesday, y^e names of good doers and well wishers by whom livelihoods, tenements, buildings, jewels, books, chalices, vestments, with divers other ornaments and goods as followeth, hath been given unto this church unto y^e honor and worship of Almighty God, and increasing of divine service, both man and woman, and what benefits they did for themselves and for their friends and for others by their lifetimes, and what they list for them to be done after their days that they shall not be forgotten, but be had in remembrance, and be prayed for of all this parish that be now, and of all them that be yet be to come, and also for an example to all ye that be now living that ye may likewise to do for your self and for your friends in this world, that after this transitory life ye may be had in the number of good doers rehearsed by name, and in the special prayer of Christian people

* Rock's Church of our Fathers', iii., 102.

in time coming, that by the infinite mercy of Almighty God, by the intercession of our blessed Lady and of all blessed saints of heaven in whose honour and worship this church is dedicate, ye may come to the everlasting bliss and joy that our blessed Lord hath redeemed you unto. Amen."

"And the anniversaries of the good doers to be held and kept in this church yearly, that is to say on Thursday shall be their Dirige, and on Thursday next their masse."

To this "general mynde" it was customary to call the whole parish. If any common man absented himself he was fined 4d., if a Council man 1s. 4d. A feast was provided which comprised cakes, ale, and wine. At one of these entertainments, A.D. 1472, a dozen gallons of ale is charged 12d., and 4s. 4d. additional for red and sweet wines. At the service six priests and the clerk administered. The parish book was brought forth, and while the people listened it was read:—"These be the names of the good doers," beginning with Roger de Gurdeler, who "gave unto y^e said church, unto y^e worship of y^e precious and glorious Sacrament to be borne in a coope (cup) of silver, gilt within and without, with a cover and a crucifix on y^e head, with precious stones worshipfully endued, and a little cup and a spone weighing 45oz. 7dwts. And that this said coope, cuppe, and spone be not alienated, sold, neither broken, under pain of cursing, as appeareth by writing under the Dean's seal. God have mercy on his sowle."

We have then a detailed enumeration of the good deeds of "good doers," and it is striking to see the amount of zeal that the records of a single

parish church show on the part of those who had determined by being rich in good works to lay up "in store for themselves a good foundation against the time to come."

We will give a few other typical instances of these benefactions: "The corner house in Corn Street":—John le Gate gave iii.s. to the Church of Alhalowen of the corner house next the conduit to find v. tapers before our Lady Altar; and thereto longeth one evidence with two seals.

"God have mercy on his sowle."

"Thomas Ffylar and Agnes Ffylar gave unto the said churche one tenement in the High Street, in the which she some time dwellyd in, and afterwards John Roger, mercer, otherwise pynner dwelled in; and pay yearly to have their obit kept by the vicar and the procurators of the said churche the xxth day of November after the tenor of their testament.

God have mercy on their sowlys. Amen."

"The which tenors here followeth, and to be spend yearly about it xiis.

In primis to viii. priests, to every of them iii.	-	iis. viiid.
Item to poor people in bred, to be delivered	-	vs.
Item to ye clerke for ryngyng of ye bells	-	xiiid.
Item for his Dirige	-	ijd.
Item to ye Bellman, of this town, otherwise bedeman	-	ijd.
Item to ye Vycar of ye church for ye tyme being for his wax at Dirige and masse brengyng	-	xiiid."

The entrance doorway with an obtuse pointed arch and some other features of the vicarage still remain in All Saints' Court on the south of the church. Of the house of the Calendars at the north west angle of church nothing is left.

The most conspicuous monument in the church is one to the memory of the philanthropic Edward Colston. He was born in Bristol Nov. 2, 1636, and died at Mortlake, in Surrey, Oct. 21, 1721, and he lies interred under the Communion Table in this church. On every Sunday a nosegay of such flowers as the season affords is placed on his monument, money having been left for the purpose.*

ST. PETER'S CHURCH.

The oldest portion of this church is the tower, which is a massive structure of Norman workmanship, in strong analogy with the vanished castle near whose barbican it stood, the walls of the belfry being more than six feet thick. The pillars dividing the nave from the aisle consist of small clustered columns with filleted capitals of Perpendicular date. The windows of the south aisle are of the same style and of good design; those in the north aisle have been renewed with much loss in effect. The roof, both of the nave and the aisles, is divided into squares by ribs springing from corbel heads, and is likewise of Perpendicular date.

At the east end of the south aisle there is a fine brass of the date of 1461, representing a priest (Robert Loud) in eucharistic vestments and bearing a chalice. In the south aisle is a sumptuous tomb, with the kneeling figure of Robert Aldworth and his wife, who resided in the ancient house adjoining the church, now called St. Peter's Hospital, where he died in 1634. Near

* The best thanks of the writer are due to Messrs. Day and Clymer, wardens of All Saints, for their kind readiness to allow him to make extracts from the church documents.

this is a storied monument of costly workmanship, having a canopy supported by six fluted pillars, whose one-time gilded capitals are now disfigured by white-wash. Upon the sculptured sarcophagus comprising the tomb lies the effigy of a lady in the quaint costume of the reign of James I. Of her no account is given, except that she belonged to the family of Newton, of Farr's Court. Mr. Ellacomb, however, supposes her to have been Antholin, wife of John Newton, brother to Sir Henry Newton, who died in 1599. Contrasted with and lying at the foot of this costly memorial is a humble but suggestive *memento mori* in the form of a cadaver or skeleton, to the memory of some unknown person.

At the east end of the south aisle was a chauntry to the honour of the "Blessed Mary of Bellhouse."

In the burial ground was interred Richard Savage the poet, the story of whose life by Johnson, has imparted so romantic an interest to his name. He died, a debtor in Newgate, Bristol, 1st of August, 1743.

CHRIST CHURCH.

The present edifice, which stands on the site of a Norman, if not Saxon foundation, was opened in 1790; it is built of freestone, and any attempt at exterior ornamentation has been expended on the western end and the tower, the rest being enclosed by houses, and rudely finished. The style is nominally Grecian, with variations in accordance with modern exigencies and tastes. There being no classical prototype to guide the construction of an ecclesiastical interior, the present is divided in the manner of a Gothic edifice into three aisles. The result is favourable, the propor-

tions being symmetrical and chaste, and the embellishments such as to gain admiration in any reasonable tolerator of the style. Behind the organ is a relic of the old church in the form of an ancient oak chest secured by three locks, one of which is very curious. "I remember the old church," says Southey, who was born and spent his boyhood near its precincts, "a row of little shops was built before it, above which its windows received light, and on the leads which roofed them crowds used to stand at the chairing of members, as they did to my remembrance when peace was proclaimed after the American War. I was christened in that old church, and vividly remember our pew under the organ. ——— was then rector, a humdrum somnificator, who, God rest his soul for it! made my poor mother stay at home Sunday evenings because she could not stay awake after dinner to hear him. A worldly-minded man succeeded, and effected, by dint of begging and impudence, a union between the two parishes of Christ Church and St. Ewen's, for no other conceivable reason than that he might be rector of both. There were quarter boys to this old church clock, as to St. Dunstan, and I have many a time stopt with my satchel on my back to see them strike."

In Barrett's Bristol is a rude engraving of the old church in relationship with the High Cross. The quarter-boy clock spoken of by Southey is there exhibited; and no doubt when Queen Bess passed by the church with her brilliant company in 1574-5, her eye rested for a moment on what was substantially the same old timekeeper. In 1575 there is this entry in the Proctor's book:—"Paid the clerke for singing, and dressing the Rolodge agaynst the Queen's Majesty's

comyng, as by his accompt apereth." In 1702 and later there are payments of £2 a year to a man whose favourable surname was "Sobriety" for keeping the clock. A singular Christian name in these church papers is *Marrabulus*, or as it is more accurately spelt in another place *Mirabilis* Jefferies.*

Among the obits or yearly commemorations was one founded by Richard Gerele, who by will gave nineteen tenements and a garden to find a chaplain daily in the Chapel of St. Michael in the Church of Holy Trinity or Christ Church, to officiate for ever at mass for the soul of himself and Thomasin his wife.† Under the entries for 1534 are found—

Item the obbet of Rychard Gerele, to master parson	xvid.
Item to v. Priests	xxd.
Item to ij. Clarks, iiijd. offeryng and lights ijd.	vid.
Item to the Priests drynkyn	viiid.

Some of the lands belonging to the endowments of these chauntries had not, by some oversight, been commuted to the Crown so late as the 15th year of Elizabeth; for William Yate and Thomas Fawcett, Proctors at that time, showed that money derived from these lands had been employed in the payment of priests, curates, and clerks, and for the ornaments of the church, &c. It appeared, however, that the Queen had a virtual claim upon the estates, and they were therefore purchased from the Crown. The rector in 1776 had some dispute with the wardens of the pro-

* Owing to the ready kindness of W. B. Peck, Esq., senior warden, the writer has been enabled to make many curious extracts from the Vestry Book, which will be used in the forthcoming re-issue of a "Book about Bristol."

† Barrett, 466. MSS. Vestry Book.

perty relative to some customary donation from it kept back from him. The parish deeds and papers being withheld from his examination he filed a bill in Chancery, and after a tedious suit of three years' duration, and a cost of upwards of £1400 out of the church stock, the court declared the charity must be confirmed, and the lands, &c., appropriated as in the deeds of 31 Elizabeth.*

Of the monuments the most notable are one to Richard Standfast, one of the sequestrated clergy; and a brass to Thomas Farmer, Mayor, and his wife, who both died in Nov. 1624. John Elbridge, the original founder of the Infirmary, was also interred here.

THE CHURCH OF ST. MICHAEL THE ARCHANGEL.

The period of the erection of this church is sufficiently indicated by its architectural style, which is neither Christian nor Pagan, but an undesirable combination of both. The tower, which is in the Perpendicular, or third pointed style, and belongs to the 15th century, is the only portion of interest that now stands of the old church. The present building was opened on Sunday June 22nd, 1777, the Mayor and Corporation attending in state.

According to a custom instituted in 1376 it was usual on Michaelmas day for the whole Town Council after they had dined, to assemble at the High Cross, and "from thence the new Mayor, with all the whole company, to walk honorably to Saint Michael's Church, and there to offer, and then to return to the new Mayor's house, every man taking his leave of the mayor, and to return home to their evensong."†

* Barrett, 467. Church Records. † Ricart's Calendar.

CHURCH OF ST. NICHOLAS.

The Honorable Horace Walpole's recorded opinion of this church that it is "neat and truly Gothic" will hardly at the present time meet with much favour. It stands on an ancient foundation, and a more impoverished reproduction of the grand old Gothic style would be hardly possible. The spire, indeed, is a redeeming feature. The height of this is 205 feet from the ground.

The former structure stood upon the town-wall, the east end standing upon St. Nicholas Gate, at the bottom of High Street. The removal of this gate in 1762 having entailed the demolition of a part of the church, it was thought judicious to rebuild the whole edifice, which was effected at an expense of £6000. The interior effect is that of an ornate assembly room, and considered apart from the affected Gothic treatment of the windows, is worthy of some toleration. The old crypt, which served both for religious services and for a cemetery, was happily preserved, and is the only portion of archæological interest that remains. It consists of two aisles, divided by five clustered pillars. From these spring the ribs of the vaulting, which have boldly carved bosses at the intersections. The date of this substructure is about 1503, at which time the old church was partly rebuilt. There are, however, portions that indicate an earlier style of architecture, a crypt having existed for several previous centuries. The festival of the Boy Bishop was here kept up with great completeness on St. Nicholas eve. "The Maire and Sherif, and their brethren," says Ricart in his curious local calendar, "walk to Seynt Nicholas Church, there to hear their evensong; and on the morrow to hear their mass and offer, and hear the

Bishop's sermon and have his blessing ; after dinner the said Mayor, Sheriff, and their brethren, assemble at the Mayor's counterthere waiting the Bishop's coming, playing the meanwhile at dice, the town clerk to find them dice, and to have 1d. of every raphill ; and when the Bishop is come thither, his chapel there to sing, the Bishop to give them his blessing, and then he and all his chapel to be served there with bread and wine. And so depart the Maire, Sherif, and their brethren, to hear the Bishop's evensong at Seynt Nicholas Church aforesaid."*

In the crypt is buried Alderman Whitson, who was a princely benefactor to the poor of the city. He died A.D. 1629. His effigy is recumbent on a canopied tomb within the north entrance of the church.

The old records of the wardens are in good preservation, and contain much information relative to the former usages of the church. The activity of the religious life was somewhat remarkable. Every day both in the church and in the crypt (which was a secondary church, and had its separate wardens) services were going on, matins, masses, nones, evensongs, and commemorations of the departed. The suffragan was "to see *daily* for the high altar when matins is done that there be ready against the high mass wine and water, and to set on the altar both book and chalice." The clerk and suffragan in their surplices are to receive "on working days" from the vicar his chasuble and other ornaments, and put them carefully away," &c. One of these sets of vestments of ruby, velvet

* More particulars relative to this curious festival and other customs, &c., attached to St. Nicholas Church, will be found in the 2nd edition of "A Book about Bristol."

and gold is recorded in the inventory (A.D. 1432) to have cost £50. Of service books as many as forty-four are enumerated to have been in the choir on 23 June, 1479, at which time an account was taken. Only one of these, a pye, was in print. The remainder comprised 9 Antiphones, 9 Grayles, 4 Legends, a Gospel, an Epistle, 3 Manuals, 2 Ordinals, 4 Hymnars, a Mass Book, a Collect Book, 9 Processionals, &c. In 1532 a Mass Book for the altar is charged 7s.

By a code of instructions dated 1481 we find that the suffragan was "to ring curfew with one bell at ix. of the clock, a convenient peal the maintenance of half a quarter of an hour." This custom, we may add, has been traditionally continued, and the curfew bell may still be heard every evening at 9 o'clock.*

ST. JOHN'S CHURCH, BROAD STREET.

The present church occupies the site of one that was to be found here in the year 1174, at which date the latter was given with others to the Priory of St. James, Bristol, and the monastery of Tewkesbury. According to local annals the existing structure was founded in the year 1388 or the year after, the founder being Walter Frampton, who had been three times Mayor of Bristol, the last time being in 1374. Frampton's will is dated 1388, and as the style of architecture is half a century later than this date, he could not have lived to see the erection of the church.

The church having formed a part of the town wall

* By the courtesy of J. R. Bramble, Esq., warden and vestry clerk, the writer has been enabled to gather many curious particulars from the documents of this church, which will be used in the forthcoming re-issue of "A Book about Bristol."

(the belfry tower and spire being erected over one of the chief gateways, which still remains) has no window either at its eastern or western end. Neither has it a transept or projecting porch, being a simple parallelogram pierced by nine Perpendicular windows on each side. On the northern flank is a range of low windows belonging to the crypt. The interior of the sacred edifice is long and narrow, and consists of a nave and chancel, divided by a tall pointed arch with mouldings of impoverished character. The roof of open timber work is of 15th century date, and good, but without ornament. A wall, in which are two Tudor doors, was built about 1570 to form a vestry at the east end of the chancel.

The richly carved Communion Table is worthy of special notice. It is no doubt identical with the one charged in the accounts under A.D. 1635.

The crypt, dedicated to the Holy Cross, is entered by a small doorway on the north side. Immediately within is a stoup; and another of these occurs, with a carved demi-angel above, in connection with an altar tomb in the south-west wall. In the eastern portion of the crypt the moulded ribs of the vaulting spring rectagonally and diagonally from clustered mural columns, but in the western division these ribs or groining ascend immediately from the ground without the support of pillars or capitals. The apex of the roof is about 11 feet from the floor. The date of the crypt seems architecturally to correspond with the superstructure, and has been pronounced by Mr. Freeman to be of the late 15th or early 16th century, but is usually reputed to belong to the earlier of these epochs. This crypt formerly

served as a chapel for a religious guild, which was established in 1465, in honour of the Holy Rood, St. John the Baptist, and St. Martin. By the rules of the fraternity a priest was to say every Monday "a mass of the Holy Ghost," and every Wednesday "a mass of requiem for all Christian souls," and every Friday "a mass of the Holy Cross," the celebrations beginning at six o'clock in the summer months, and seven o'clock in the winter.*

On the north side of the chancel is a raised tomb supporting the outstretched figure of a burgher in a long robe buttoned down the front. A border inscription denotes this to contain the remains of Walter Frampton, the founder of the present church. In the floor of the nave are brasses of a male and female figure with inscription to the memory of Thomas Vowles, merchant and sheriff, who died 1478, and Margaret his wife, who died 1470. In the crypt is a large tomb supporting the effigies of a man and his wife, and sculptured on the front are eleven children. This has been generally referred to the Rowleys, but its identity is uncertain, as is that also of the altar tomb on the south west side of the crypt. Interred here are the remains of Sir George Snigge, eldest son of Baron Snigge, Recorder of Bristol. He was drowned at ten o'clock of the night of December 27th, 1610, in attempting to cross Rownham Ferry on horseback, on his way from Sir Hugh Smyth's at Ashton. His body was not found until 10th of June following, when it was taken up, but without hands or legs.

* The emphatic thanks of the writer are due to C. S. Clarke and John Bowman, Esquires, for the facilities of access they have afforded him to the interesting documents of St. John's Church, which here, however, he has space only to touch upon.

The weather-beaten statues on either side of St. John's Gate are accounted to represent Brennus and Belinus, the legendary founders of Bristol. As far back as A.D. 1366 the name Bristol was derived from *Brennus*.*

ST. JAMES'S CHURCH.

The Church of St. James originally belonged to a Benedictine Priory, dedicated to the Virgin Mary and St. James the Apostle. It is recorded that Robert Earl of Gloucester devoted one-tenth of the stones which he had imported from Normandy for the construction of his castle, to the building of this Priory, which was formerly of considerable extent, but of which now the nave of the church alone exists, the chancel which belonged to the monks having been destroyed consequent upon the Dissolution.

The western façade is the only accessible portion of the exterior by the church of which the character of the Norman building may be discerned. Above the doorway at this end is an arcade of intersecting arches, three of which are pierced for windows. Over the arcade is a small but interesting rose window. The ancient clerestory remains but is exteriorly hidden on the north side by the adjoining houses and on the south by the parapet of the aisle. The south clerestory, however, when discovered, exhibits an arcade, extending the whole length of the outside of the church. It consists of a series of shafts with the common Norman capital supporting arches of irregular form, some

* Brennius civitatem condidit in occidentali parte Britanniae et eam nomine suo appellavit scilicet Brenstou, nunc vero per syncopen Bristow vocitatur. *Eulogium Historiarum*, vol. ii., p. 242.

pointed, some elliptic with semi-circular ones over the windows. Near the east remains one corbel shewing the height at which a corbel table once passed above these arches. In the north side the clerestory windows have what Bloxam calls nook-shafts, and are in other respects similar to those on the south ; but here there is no arcade to connect them.

The tower is of the Perpendicular style, and dates from the latter quarter of the 14th century, but since then has undergone considerable repair and alteration.

The nave of the church is divided from the aisles by two rows of massive Norman piers, which are connected by semi-circular arches. The eastern end is a modern reproduction of the Norman style of building, and consists of three circular headed windows with chevron mouldings, and beneath are two series of stone arcades.

The length of the nave is 84ft., height to the spring of the roof 31ft., breadth between the piers 29½ft, span of the arches 12½ft., diameter of piers 3½ft., height of the same a little more than twice the diameter.

The Priory of St. James stood outside the walls of the town, northwards from the Castle, whose towers and bastions rose grandly before the eyes of the monks just beyond the limits of their green sward. It was a cell to the Abbey of Tewkesbury ; and as early as the beginning of the 14th century, the suburb having gathered a population, the nave of the church, by grant of the Abbot of the parent monastery, was assigned to the use of the parishioners, these being required to erect a square belfry or tower ; and it appears also, to cover or reconstruct the roof of the nave from the tower

to the western gable. The latter part of this demand occasioned a strife between the prior of St. James and the parish, which was decided by the convent agreeing to receive 42 pence annual rent from a certain parcel of land at Redland.*

The conventual buildings of St. James presented an extensive and imposing assemblage. In the possession Mr. C. T. Jefferies, of Redcliff Street, is a painting, copied from an original drawing in the British Museum, of the ruins of the priory as they existed about the year 1630. In this view, to the extreme east, appears a strong embattled gatehouse, which gave entrance from the churchyard to a "great green court," wherein was situated a large manor place or mansion house, with a spacious long hall, a refectory, a long gallery extending westward to the church, and various other adjuncts. The chancel end of the church exhibits a large and deeply recessed Norman porch, surmounted by an arcade of small arches in the same style. In the churchyard are the remains of a fine cross, now completely vanished. Besides these buildings "on the east part or side, were galleries and chambers in them, parlour, &c., united with the west part, a little square green court, and enclosed grounds with a pigeon house, a large barton, extending to the gate in Barr's-lane, whereby was the pound; two great barns, also several buildings lying on both sides the said barton."† The

* Barrett and succeeding writers on Bristol Church History, assign A.D. 1374 as the date when this church was made parochial, but an existing legal document contemporary with and bearing the date 1308, 9 February, is based upon the circumstance of the church being already parochial.

† Sealy's Architectural Mag., p. 13.

priory buildings including the chancel of the church, which also belonged to the monks, were destroyed subsequent upon the dissolution, and dwellings erected on their site. Of these buildings there are now scarcely any remains. There are, however, two houses standing on the site of the Refectory (eastward from the church) easily distinguishable by their painted red fronts, the walls of which are of the original masonry of the building, though the doors and windows are modern. There are two buttresses on the south side of these houses, and another at the south end of the eastern side, of the early English character, of no great projection, and the edges are chamfered ; and similar buttresses may be seen from Cannon Street, at the back of the same houses.*

The south aisle was removed in 1698, to make way for one of more commodious dimensions, which is built in the most debased style of Perpendicular, at a cost to the parish of £600. The new north aisle was consecrated on Oct. 26, 1864. The columns are of Purbeck marble, and the whole effect of the aisle is quite at variance with the general character of the church, which instead of lightness and polish, presents massiveness and solemnity of feature. The cost of this addition inclusive of general repair was £4000.†

The priory was dissolved in 1540, the last Abbot being allowed an annual pension of £13 6s. 8d. for his lifetime.

It was then granted, together with its appended estate of lands, manor house, tenements, &c., to Henry Brayne, a merchant tailor of London, upon whose decease it passed to his son Robert. From him (in

* Ibid. 20. † Church Builder.

1529) the estates descended to his sisters, Dame Emma, wife of Sir Charles Somerset, and to Ann Winter, wife of George Winter, as co-heiresses. Sir Charles Somerset and his wife Emma lie buried here on the south side of the altar, where is a Corinthian monument with kneeling figures, to their memory, and that of their only daughter. This daughter married Sir Charles Redcliff Gerrard, Knight, by whom about the year 1626, the premises were conveyed to the Mayor and Corporation of Bristol.*

In the wall of the south aisle towards the east is a recessed tomb supporting a recumbent figure, which a modern inscription purports to represent Robert, Earl of Gloucester, the founder of St. James's priory, who was buried within the walls of the church. Some reasonable doubt may be cast upon the accuracy of the inscription. Leland states concerning the interment of this powerful Baron, that "Robertus, consul Cownte of Gloucestershire (was) buried in the *quiere*, in the myddle of it, in a sepulchre of grey marble, set up upon six pillars of smaull hethe. In his tumb was found a writynge in parchment concernynge the tyme of his death, and what he was. A brewer in Bristow hathe this writynge."†

In an ancient chronicle of Tewkesbury cited in Dugdale, it is stated that this illustrious Earl died on the 31st October, 1147, and his body was honourably interred in the choir of the priory of St. James, Bristol, in a tomb of green jasper. At a time when there was no study of geology, either of these designations (green jasper or grey marble) might have been interchangeably used for the same material, which was possibly varie-

* Barrett, 385. † Lel. Itin. vol. iii., p. 91.

gated. The present tomb neither in material nor form answers to that described by Leland, which stood upon short pillars. The somewhat slight and feminine shape of the effigy has induced more than one writer to infer that a woman is represented, and that the figure may probably be intended for the Princess Eleanor of Brittany, who was interred in this church, but afterwards removed to Amesbury. An examination of the countenance, however, will evince that a male person is figured, for the features, masculine in contour, though frayed and worn, show a beard and moustache. The modern shield attached to the monument seems to have been arbitrarily charged, for heraldic devices had been scarcely introduced at the time of Robert's death, only one example (that of Magnaville (obiit A.D. 1144) in the Temple Church, London) being known so early as this period. The arms (three clarions) however in the present instance derived, are precisely those of the Grenville family, one of whom, Richard de Grenville, was actually interred within this church.* His death occurred in A.D. 1240, in the month of June, about two months before the demise of Eleanor of Brittany. As the dress is that of a civilian rather than of a warrior, we may reasonably conclude that the present monument was designed to commemorate this Richard Grenville, especially as the effigy is considered, by no less an authority than Mr. Planché, to be at least half a

* A.D. 1240, Circa kal. Junii obiit Ricardus de Greynvil et sepultus est in capitulo Sancti Jacobi Bristolis. Aleinora de Britannia consanguinea domini regis Henrici Angliæ obiit IV. idus Augusti, et sepulta fuit in ecclesia Sancti Jacobi Bristolis, sed circa festum Sancti Nicholai vi regia apud Ambresburiam translata est. — *Annales de Theokes*, p. 188.

century later than the Earl of Gloucester's demise.* He held land at Little Compton, all which he bequeathed to the Abbot and Convent of Tewkesbury, and though his wife afterwards obtained a brief from the king for the restoration of her dowry out of this land, the conventual legatees were confirmed in their possession.† The first Richard de Grenville was brother of Robert Fitz Hamon, and, therefore, uncle of Mabel his daughter, who married Robert Earl of Gloucester. The name Richard was maintained in several generations of descent, but the lineage is historically obscure.‡

Another illustrious personage here interred was the Princess Eleanor of Brittany, whose final captivity by the last enemy was only like a prolongation of her rigid life-long imprisonment within the sepulchral walls of the castle. Eleanor was placed in Bristol Castle, in the custody of four knights, who kept continual guard, and after forty years' confinement here and elsewhere, was released by death on 4th of August, 1240. She was first buried in St. James's Church, but by order of the king, Henry III., her body was in the same year translated to Amesbury§.

In the pestilence that devastated Bristol at the beginning of the 17th century, 390 persons died in St. James's parish, between August 20th, 1603, and March 22nd 1604. The unenclosed portion of the burial ground was employed for the interment of those who died in the pestilence, and the ground has remained unbroken

* Journ. of Archæol. Asso., xxxv., 37.

† Annales de Theokes, 107, 108, 117, and 138.

‡ See "Prince's Worthies of Devon."

§ Evans, 163.

for fear of the development of latent contagion, of which it is said instances have occurred through partial infraction of this restriction.

ST. MARY-LE-PORT.

This church is dedicated to our Lady of the Port, there having been formerly an open approach from the river to the south side of the sacred building, whence the appropriateness of the dedication. The earlier fabric on the same spot is believed to have been founded by William Earl of Gloucester, son of the great Robert, "for he is expressly said about 1170, to have granted and confirmed this church to the priory of Keynsham, for the sustentation of the canons there."

The interior of the present structure has suffered so much in adaptation to modern exigencies of worship, as to realize in a very imperfect degree its mediæval aspect. It consists of two aisles of unequal breadth, the clustered columns dividing which are of Perpendicular date, assignable to the 15th century. The roof has been more than once renovated, and at present shows a concave ceiling, with some attempt at ornament. In the south wall of the chancel is a flight of steps, now conducting to the pulpit, but which formerly led to the rood loft. The tower is of the Florid style like the interior, and is 72 feet in height to the base of the pinnacles. The windows in the upper part of the tower, the panelled parapet, and corner turret are among the best details of the church and deserve notice.

The accounts of the successive wardens of the church of St. Mary-le-Port, appear not hitherto to have been

examined. Like most old church records they contain many quaint and interesting entries that illustrate current events and customs as well as the individual life of the church. The documents have been kept in the form of a separate book for each year, and through the kindness of the vicar and ready sanction of Mr. Jones, the present warden, we have been allowed to inspect them. The earliest record we have been able to discover is of the last year of Queen Mary, 1558, when the pre-Reformation usages were going on, or rather, after having been resuscitated, had arrived at their consummation. We have a payment of 6d. for "housselling bredd and frankincence," the fragrant clouds of which latter were probably the last that rose up from the waving censer in this church. Analogous entries are :—

Item paide to the wax maker for the Paschall and fonte taper iiij s.

Item paide for bearing of the banners the Rogacion week iiij d.

Item paide for carriage of the crosse and rynging of the bells upon Corpus Christi daye., xd.

Item paide to a priest that saide masse in the churche upon Sunday after Mydsomer Day, xijd.

In 1583 the year's "wages" of Mr. Arthur, the "parson" was £xiii. Entries in the church accounts show that a carpenter's wages between 1583 and 1586 were a shilling a day.

Lord Macaulay's well-known representation of the poverty, and consequent inferior social position, of the clergy before and under the Restoration receives confirmative illustration from various items in the records of the present church, of relief afforded from the parish funds to clerical recipients.

A.D. 1638 at the thirde of May, given to a poore minister, 2s.

1639. Item the 22nd of June, given to a poor minister, 1s.

Item given the first of October to a poore minister's wiffe, 1s. 6d.

Item given to a verie poore minister, 6d.

1645. Gave to Mr. Semore, a minister that was gwayne to Ireland, 1s.

(In the verb *gwayne* which is Peter Muggleworth's—the warden for 1649—invariable way of spelling *going*, we have a Gloucestershire provincialism still in use among the uneducated).

A.D. 1663. Gave a poor minister wch came with a teastemoneall, 2s.

A.D. 1664. Item paid to 2 ministers which came out of Ireland, 1s.*

CHURCH OF ST. THOMAS THE MARTYR.

The present architectural interest of this church is soon dispatched. The only portion of the ancient structure remaining is the mutilated tower, which has been shorn of turrets and battlements. The roof of the belfry internally shows some ribs and elaborate bosses of the early English style, but externally the buttresses and windows are of the Perpendicular period. The old church is said to have been conspicuous for beauty, and to have ranked second to St. Mary Redcliff for spaciousness and elegance, but no authentic drawing of it appears to have been preserved, or at least published. It is mentioned in documents as early as 1200, and was then, like Redcliff, only a chapel to another (Bedminster) church.†

The existing building was completed in 1793, a date that of itself gives assurance that the character of the architecture does not deserve much admiration. Over

* We may mention that like items appear in the accounts of St. John's, and all, or nearly all, the other churches of Bristol. We are obliged to defer the quotation of numerous details from St. Mary-le-port records to a further occasion.

† Barrett, 550.

the Grecian (?) altar-piece which is flanked on either side by a life-size statue, is a large picture of the "incredulity of St. Thomas."

Several chauntries were founded in the earlier church, one being for the soul of Richard II. The walls are much encrusted with sepulchral memorials, but none of the epitaphs are of very general interest.

Near the church is an almshouse of which the inscription on the front will be sufficient to indicate its character—"St. Thomas Parish. This almshouse was erected in the year 1292 for sixteen persons by Simon de Burton, and rebuilt Anno Domini 1721. He was five times Mayor."

CHURCH OF ST. PHILIP AND JAMES.

The church of St. Philip and Jacob (or James) was primarily a chapel to a religious house of the order of St. Benedict, which stood at the eastern end of the present church. A market having been established near its site for the service of the castle and town, and the inhabitants of the district consequently increasing, a parish church was instituted, but at what date is uncertain. It is mentioned, however, as early as 1174, as then being one of the fees of William, Earl of Gloucester. In 1388, Henry Wakefield, Bishop of Worcester, annexed the rectory of St. Philip to the monastery of Tewkesbury; and in the Bristol Museum and Library is the original document by which Thomas, Abbot of Tewkesbury, appoints brother Richard Worcester, prior of St. James, Bristol, to take possession of the church of St. Philip and Jacob in their name, and receive the tithes and oblations. The deed is dated at Tewkesbury 20th Aug., 1393.

The tower, except the upper stage, which is debased Perpendicular, is a beautiful piece of Early English, having two collateral lancet windows, with bold mouldings on each of the four sides. A deeply recessed, boldly cut arch of the same (13th century) date, opens from the base of the tower into the church; a corresponding arch divides the north aisle of the chancel from the nave aisle. The nave is separated from the aisles by three arches of exceedingly broad span, which are sustained by massive pillars, having no capital or base, the moulding springing direct from the ground, and round the soffit of each arch.

The roof is of timber with carved bosses: it is an excellent specimen of the time of Richard II. (c. 1390), but until lately it was concealed by a plaster ceiling. Some interesting corbels which supported the old roofs of the aisles still jut from the walls.

The Kemys aisle or chauntry to a family of that name, is divided from the chancel by pannelled arches of the time of Henry VII. Inside of one of the piers is a stone staircase, which is believed to have communicated with the rood loft. Some remains of steps in another pier belonged to a stone pulpit; and in the pier adjoining is an aumbry for eucharistic vessels. Recent investigations of the same piers have led to the discovery that they form a superadded casing to the remains of a beautifully proportioned Early English church which occupied the area of the present chancel. In the external north wall of the chancel may be seen traces of a 13th century window and doorway.

The font is Norman. A coffin slab, with some curious ornament in transitional Norman (12th century) is preserved in the church. A portion of a sepulchral

effigy of a warrior in plate armour, of uncertain identity, is in the north aisle.*

It should be added that the church underwent, in 1868, a partial restoration, by the competent hands of Messrs. E. W. Godwin and Henry Crisp.

REDCLIFF CHURCH.

The earliest allusion to a church at Redcliff appears in A.D. 1232, at which time, by arrangement of Bishop Joceline (who built the west front of Wells Cathedral), a reconciliation was here effected between William de Blois, Bishop of Worcester, and the Abbot of Tewkesbury, who had been at variance. Concerning the primitive church of St. Mary Redcliff, nothing is known, but that a church here existing had fallen into ruinous condition by the year 1246, is shown by an Indulgence of that date, allowing a remission of ten days' penance to all who should contribute to its restoration. The inner north porch, and the lower part of the tower, both of which portions are Early English in style, probably belonged to the edifice here referred to. Mr. George Godwin, the architect to whom the current work of restoration has been entrusted, states that he "found corroborative evidence of the existence of a church of the same date as the inner porch in taking down the clerestory of the chancel, some of the old stonework being worked up in the walls."

The city chronicles assign the honour of erecting a

* The writer has to thank Messrs. Sheet and Rogers, the wardens of the church, for their kind permission to make extracts from the old account book, which space does not allow him here to quote, but are intended shortly to appear in "A Book about Bristol."

subsequent church on the spot, to Simon de Burton, who filled the office of Mayor of Bristol five times, between the years 1291 and 1304. De Burton's structure was left unfinished, and the credit of completing the work is given to the elder William Canynge, who in 1376, it is said, "built the body of Redcliff Church from the cross aisle downwards, and so the Church was finished as it is now." So greatly however was the building indebted to the second William Canynge, grandson of the preceding, that he has been popularly, though erroneously, called its founder. About the year 1445, as the city records relate, there occurred a terrible storm of thunder and lightning, by which the spire of Redcliff Church was struck down, and falling upon the body of the fabric, it so injured this as to render extensive rebuilding necessary. Much doubt has been caused concerning this catastrophe to the structure, the objection being contained in the denial that the spire was ever raised above its present elevation. Barrett, however, quotes the evidence of three distinct and independent documents in proof that it was thus destroyed. Moreover, William of Worcester, who was a native of Bristol (obit. A.D. 1484), and living in the parish of St. Philip at the time the reputed event occurred, in giving an elaborate account of Redcliff Church, after stating the height of the tower to be 120 feet, incidentally adds that "with the spire as it now remains, *broken by a storm*, (it) is 200 feet high. The trustworthy character of this witness is unimpeachable, and his living at the time and place of the asserted occurrence, excludes the possibility of his having been misled by false information concerning a disaster so signal as the one in question. The Church thus ruin-

ously damaged was re-built by the second William Canynge, and with what success the present superb edifice shows.

In Redcliff Church the third pointed or Perpendicular style of Gothic architecture is seen in its highest realized perfection. In completeness of parts, grandeur of proportion, and finish of detail, the building partakes of the character of a cathedral. The sumptuous porches, particularly that on the north side, the panelled walls, flying buttresses, trefoiled parapet and delicate mural pinnacles, the stories of windows with their elegant tracery, the elaborately worked tower, triple aisled transepts, long and lofty nave and chancel, tall clustered columns and magnificent groined roof, together with the Lady Chapel and undercroft, are attributes that entitle the edifice to rank architecturally with at least the secondary cathedrals of England.

The most specific feature of the building is the superb north porch. The festooned and interwoven foliage of the doorway, the voluptuously decorated windows, panelled buttresses, and crocketed pedimental niches of this exquisitely wrought architectural member, present in combination a complexity of design, and an elaboration of detail and finish that entitle it to the claim of being the most sumptuously ornate church porch in England. The restoration of this portion of the fabric has cost £2535, and the skill and fidelity with which the complex devices have been re-carved by Mr. Rice, indicate a manipulative talent not inferior to that displayed by the original artist. In the muniment room, over this porch, still remain the chests now mouldering away, in which the erratic genius Chatterton asserted that he found the MSS. of the Rowley Poems.

The pulpit and font are very handsome specimens of modern carving, the work of Mr. Rice.

The most noticeable monuments are the following :—

I.—John Lamyngton. Westward of the south porch is a large stone coffin with a figure in partial relief, and an inscription in ancient characters which reads, “Joannes Lamyngton.” He was vicar of the church in 1393, and “his sprite” is an interlocutory character in one of the Rowley poems.

II.—William Canynge, the rebuilder of the church. Under a canopied recess in the south transept is an altar tomb with the recumbent effigies of William (the second) Canynge in his civic robes as mayor, and his wife in the costume of a lady of her day. The inscription denotes him to have been five times mayor of Bristol, and subsequently Dean of Westbury, in which capacity he died on 7th November, 1474. Adjoining is a second monument representing the same Canynge in his priest's robes. On a stone near these tombs says Barrett was the following, “Here lies Thomas Chamber, of this parish, merchant, and his wife Ann. She died 1629, he October 1647.

“ When I was young in wars I shed my blood
Both for my Queen, and for my country's good ;
In elder years my care was chief to be
Soldier to him who shed his blood for me.”

In the east end of the north aisle of the chancel is a richly sculptured double altar tomb, with fretwork canopy, to the memory of Thomas and Philip Mede, formerly rich merchants of Bristol. Philip Mede succeeded Canynge as mayor of the city in 1458.

There is also a memorial tablet to Sir William Penn,

a native of Bristol, and the father of the famous Quaker of his name. He died in 1670.

The rib of the Dun Cow, which according to "our marvelling boyhood's legends' store," belonged to a quadruped so named which supplied all Bristol with her milk, may still be seen on the left hand of the western entrance to the church. In reality we believe it is a rib of the cow whale, and according to an entry in the Town Records, it appears to have been brought hither in 1497, probably by Sebastian Cabot, who about that time discovered Newfoundland.

On July 2nd, 1543, the day of the visitation of our Lady, the Litany was first sung in English in a general procession from Christ Church to the Church of St. Mary Redcliff.

In the first year of Queen Elizabeth mass and processions were still continued, and there are payments for the bearing of the cross, for large candles and frankincense, but in the 2nd year of her reign, entries are made of payments for taking down images and altars, and for painting scripture in place. On her progress through Bristol, in 1573, Queen Elizabeth visited this church, and was so struck by its majesty as to pronounce it the "fairest and stateliest parish church in England."

Redcliff Church came in for a full share of injury during the Commonwealth. Its estates, worth £400 a year, were in great part wasted or alienated, and have been since only partially recovered. The structure itself also suffered,—images and ornaments being destroyed or defaced; brasses were torn from the monuments, and the organ was broken down; also "getting together the prayer books, and the homilies,

and even the bibles, with cushions, cassocks, &c., they made a bonfire of them, as the funeral pile of the church, and parading the streets with streamers made of the surplices cut into flags, and tooting upon the organ pipes, they marched in triumph through the streets.”*

The inner north porch is part of the earlier church, and was erected in the first decade of the 13th century, at which time grants of land were made for repairing the church. Against the east and west walls are arcades of five equilateral pointed arches, supported by detached pillars. The foliated capitals, and multiform corbels will yield much interest to the architectural student. In the south west wall is a small cell which was formerly the confessional.

The groined roof of the nave and chancel, with the richly designed bosses (each different) at the intersections of the ribs, is now relieved by gold and colours, and the gorgeous and imposing effect well justifies the resuscitation of the ancient practice of bringing out details in this manner. The reredos is a fine piece of recent carving : it cost £800.

The capstone of the new spire was laid May 10th, 1872, by the Mayor, Mr. W. Proctor Baker, and the Mayoress. At the moment, two o'clock, when the ascent was to begin there came on a violent thunder-storm, which seemed to cast “ominous conjecture” on the success of the enterprise. In half an hour, however, the rain somewhat abated, and the perilous feat was successfully accomplished. The Mayoress ascended by means of a “lift” or cage, but this method served his worship only for a portion of the journey, a hundred feet

* Barrett, 590.

from the summit being effected by a ladder. Others who went up were the Rev. Canon Randall (the vicar), Messrs. Mervyn King and C. B. Hare (the churchwardens), and Arthur Baker past churchwarden. The cost of the spire was £5500.

The restoration of the church has been conducted on a successful and magnificent scale over a period of 30 years, during which time upwards of £40,000 has been expended upon the work.

The wardens' records contain many characteristic particulars of the past life of the church. Of these the curious account of the appurtenances of the Easter Sepulchre has been several times printed, and which we will therefore omit. We will give instead the following original details of the expenses on Corpus Christi day. This festival was celebrated on the Thursday of Whitsun week, and being held in the bright summer weather, an opportunity was afforded for a brilliant display of the hallowed banners, chalices, and crucifixes, which, with images and pictures of legendary and scripture saints, were conveyed to the sound of music and chaunts in procession through the streets, whose houses were decorated with rose garlands and green boughs, and hung with rich tapestries, the consecrated Host, the crown of the rejoicing, being carried on a silver pyx beneath a canopy of silk and cloth of gold. Associated with the pageantry were mysteries and Passion Plays, in which monks, friars, and priests, and the various civil and religious guilds assisted.

COSTS ON CORPUS CHRISTI DAY (C. 1520).

In primis for bread at the breakfast for priests, friars, clerks, deacons, and children of the chapel, ix*d*.

Item for ale at the same breakfast, xi*id*.

Item for all manner of vitaillis at the same, xvd.
 Item for v. priests wearing copes, xxd.
 Item to v. clerks, xd.
 Item to iiij. sub-deacons wearing tunicles, iiijid.
 Item to vii. children of the chapel., xiiid.
 Item to the sexton for bearing of the cross, iiijd.
 Item for bearing of four flowered torches, viiid.
 Item for bearing of four torches unflowered, vid.
 Item for bearing of ii. censers, iiijd.
 Item for bearing ii. candlesticks, iid.
 Item for bearing of the sacring bell, id.
 Item for xvi. ringers, vs. ivd.
 Item for bearers up of cope, vid.
 Item for bearing of the ship, id.
 Item to ii. friars for bearing of the shrine, xvid.
 Item to ii. helpers to the shrine, iiijd.
 Item for a pottle of wine in the Marsh, iiijd.
 Item for making of the shrine, iiijd.
 Item for bearing of St. George's Standard, ijd.
 Sexton's dinner, id.*

TEMPLE CHURCH.

The district south east of the Avon, still recalling the memory of the Templars by its name, was granted to that famous brotherhood of Crusaders by the powerful Robert, Earl of Gloucester, in the year 1145.

The church erected by the Red Cross Knights was small and certainly not to be identified with the present structure, which is of later architecture than the Norman original.† The oldest portion of the existing fabric is

* The writer's thanks are expressed to Mervyn King, Esq., for his kind permission to make the above and other extracts from the Church documents.

† In the Report of Prior Philip de Thame, entitled "Extenta Terrarum et Tenementorum Hospitalis Sancti Johannis Jerusalem,

the chancel, which belongs to the Decorated period, a style that prevailed through the greater portion of the 14th century. The remainder of the church, including the pillars of the nave and the north and south ranges of windows, are of the Perpendicular style, and belongs to the 15th century. Some remains of ancient coloured glass still occupy several windows of the chancel and Weavers' chapel. The roof of the nave is pointed and divided into squares by oak ribs, with bosses at the intersections. The tower as far as the trefoil band (which can be discerned about two-thirds upwards) probably belongs to the year 1397, at which date Reginald Taylor, a hermit residing at the Chapel of St. Brendon, on the "mount" of Brandon-hill, bequeathed money towards its erection. According to William Botoner, *alias* Worcester, however, the tower was built anew in A.D. 1460, but it is likely this assertion applies only to the upper stage or that above the ornamental band referred to. The interval occurring between these distinct erections is fairly attributable to the foundation of the earlier story having sunk while the work was in progress, and thus causing the alarming inclination for which the tower is so remarkable. The parapet overhangs the base as much as five feet. An inspection of the interior of the tower will show that an attempt was made to prevent an increase

in Anglia ;" in the year 1338, supplied by him to the Grand Master, we find the following entry under "Bristoll"—

Est ibidem una parva ecclesia appropriata, que valet per
 annum iiij marcas.
 Et de redditu assiso per annum ... ij marce et dimidia.
 Et placita et persiquista curiarium valent ... j marcām.
 (Hospitallers in England, p. 184. Camd. Soc.)

of declination by a species of columnar buttress, relieved on the north side by a corbel.

The north aisle of the chancel is known as the Weavers' Chapel, from the Guild of Weavers having anciently adopted it for their special oratory. The unique candelabrum in the chancel, representing with enrichments a mail clad knight thrusting his spear into a dragon, is an exquisitely designed piece of fifteenth century work. An inscription on the south wall denotes that the "Chappell and a piece of ground thereunto belonging (was) granted in the Reign of Edward the First to the Company of Weavers for their use for ever, 1299." On the floor may be seen inscriptions to members of the guild here interred. The tombstones have shuttles and other devices emblematical of the weaving craft.

On the floor towards the chancel is a brass representing the half figure of a civilian with clasped hand, with the following inscription—(the date, 1396, has disappeared):—

*Es testis, Christe, quod non jacet, hic lapis iste
Corpus ut ornetur, sed spiritus ut memoretur,
Huc tu quo transis, magnus, medius, puer an sis
Pro me funde preces, dabitur, mihi sic veniæ spes.*

"Thou art witness, O Christ, that this stone is not here laid to adorn the body, but to commemorate the spirit. You who pass by, whether old, middle-aged, or youth, make supplication for me, that so I may attain hope of pardon."

On the floor of the chancel is a brass of a priest, without date or inscription. He is habited in a cope, with an embroidered orfray down the front, and

fastened at the neck with a brooch marked with a cross. The date is considered to be about 1460.

In the chancel is a monument to John Stone, thrice mayor of Bristol, who had four wives; he died 24th June, 1575. While he was at mass here in Queen Mary's reign there came one Richard Sharp a weaver out of a little door in the Weavers' chapel (this doorway is filled up, but its outline may be discerned), and proclaimed the worship to be idolatry. Thereupon this John Stone caused his sergeants to apprehend him; and being convicted he was publicly burnt for the offence on St. Michael's hill, near the turnpike, where the four roads meet.

Another brass is inscribed to Richard Lloyd and his six sons and seven daughters. He died May 13, 1621.

On the north wall of the chancel is a long Latin inscription to members of the family of Knight. Of these, Sir John, who died in 1683, aged 71, was the most notable in his day; and his character for intemperate and aggressive toryism has been revived and attacked with no little asperity by Macaulay. While Sir John Knight was mayor his Sunday recreation was hunting down Nonconformists whom he heartily hated. The charitable feeling of Sir John towards Dissenters was fully sympathized with and encouraged by Guy Carlton, then Bishop of Bristol, who was a marked huntsman, and showed his agility in the pastime, whether his quarry were nonconformists or foxes.

On one occasion the prelate (19 May, 1677) sent a letter by his secretary to Sir John Knight, to acquaint him of a meeting of Baptists in the castle, on the morning of that Lord's day. The secretary found Sir

John, in company with the mayor, on his knees at devotion at his parish church of Temple, "and delivered him the paper of the bishop, whereupon Sir John, advising with the mayor, sends four sergeants to disperse the meeting of Mr. Way in the castle, and so they departed." Six of the attendants at this meeting were subsequently "convicted upon the Conventicle Act."*

In the year 1568, Thomas, Duke of Norfolk, subsequently beheaded for complicity in treason with Mary Queen of Scots, visited this church in company with other lords, being induced by curiosity concerning the obliquity of the tower. He had the bells rung to try the truth of the tower shaking at such times.

Preaching of John Wesley.—The following entry occurs in the journal of this remarkable divine, under Sunday, 6th Oct., 1782. "I preached in Temple church, between our own morning and evening service; and I now found how to speak here so as to be heard by everyone: direct your voice to the middle of the pillar fronting the pulpit."

The church has recently undergone a most judicious restoration under the care of Messrs. Ponton and Gough, architects.

REMAINS OF TOWN WALL, MONASTIC HOUSES, &c.

The original cruciform arrangement of the town is still indicated by the rectangular intersection of the four central streets, Broad Street, High Street, Wine Street, and Corn Street, which, from mediæval days, have continued to be the principal business thoroughfares. The ancient gateway, with its portcullis grooves,

* Broadmead Records, 161.

at the lower end of Broad Street, is a typical feature of the old town, that maintains its original position. A much earlier gateway, within a few hundred yards to the east of St. John's Church, also exists. This is a piece of 13th century work, and was called the Blind Gate. The wall at this point was about 10 feet thick.

Remains of the Castle.—The imposing mass of the castle rose from the north bank of the Avon with much the same aspect as the Tower of London rises from the same side of the Thames; the keep being equal in magnitude and like in form to the famous White Tower of the metropolitan fortress. The area enclosed by the castle walls was six acres. The barbican stood at the chancel end of St. Peter's Church, about the entrance of the present Castle Street. A glance over the bridge in Queen Street will still show the old castle wall rising up from the moat; and portions of the curtain wall may be observed from the Weir, at the back of the houses in Castle Green, which are terraced above the embattled parapet. Some extensive vaults of the fortress form the cellarage of Habgood's iron warehouse in Castle Green, and other vaults opening beneath the parapet on the Weir serve now for carpenters' shops. But the most interesting of the remains are two vaulted cells or chambers situated at No. 21 Castle Green. One of these chambers, of 15th century work, is used for a stable or something equally ignoble; the second, and most worthy attention, a fine specimen of Early English architecture, has a modern apartment erected within its precincts. The box-like form of the implanted room, however, leaves free the groined roof, and also affords space for a side passage, so that the constructive features of the ancient work can be at least

partially examined. The groins and ribs spring from clustered columns, with capitals of the stiff carved foliage usual to the first half of the 13th century. All the details are now embedded in coats of whitewash, which, together with the inhabited room spoken of, are a sufficient obstacle to thorough inspection and realisation of the proper interest of the venerable relic of the magnificent fortress, whose towers and halls once occupied the present district. The remains are, however, quite accessible, and should be seen by the archæologist, who will agree with the writer that more respectful preservation of them is to be recommended to those in authority.

CONVENTUAL REMAINS.



Dominican Priory, Rosemary Street.—Nearly opposite the Merchants' Almshouse in Merchant Street, is the Quakers' Friars, which forms an avenue to the Friends'

School, the houses constituting which are portions of the Dominican Priory.

These ancient remains consist of two rectangular buildings connected by a cloister, forming in the whole three sides of a quadrangle. The longer building, on the north, now used as a school-house, as shewn on preceding page, contains an original timber roof of the 14th century, which formed the covering of the monastic dormitory. The upper storey is lighted by a series of lancet windows in the north wall, and formerly by a similar series, but square headed, in the south wall. The west window is Decorated, and of very elegant design.

This second building, known as the "Bakers' Hall," which lies parallel with and about 60 feet south of the first, is earlier in date than that, and probably belongs to the original foundation in 1229. The upper storey was apparently the lesser hall of the Friary. The whitewashed roofs and doors, sham ceilings, sash windows, and other disfigurements, have so transformed the proper fashion of the hall, as to make it, at first sight, of little interest. The inner arches of the windows (except the east window, which has been removed to the building described, where it lights the east end), however, are preserved, and some much mutilated remains of a fireplace, in the west wall, together with the roof, which is only visible in places, are preserved; the latter is divided into six bays, and is particularly interesting as being in all probability (according to Mr. E. W. Godwin) of the same age as the building it covers.*

Historical Sketch.—The convent was founded by Maurice Gaunt, lord of Beverstone Castle, who died in

* Proc. of Arch. Inst., Bristol, 149.

1230, and is here buried. Also interred here were Sir Maurice Berkeley, of Beverstone (*ob.* 1466), and Johanna, his wife. Sir William Daubeney, and Lord Anselm de Gournay were also buried in the choir of the church, which is inferred by Mr. Godwin to have stood on the north side of the quadrangle. Bishop Latimer preached here, in 1534, one of his three stirring sermons that caused so much strife in the town.* John Hilsey, afterwards Protestant Bishop of Rochester, one of the most frequent preachers at St. Paul's Cross, London, was formerly Prior of this house.†

The Quakers' Meeting House was erected in 1669 on part of the site of the monastic buildings. In the same year, George Fox, the father of Quakerism, was married within its walls, his bride being Margaret Fell, widow of Judge Fell. In 1697, William Penn, the founder of the colony of Pennsylvania, came to Bristol and here resided, during which period he is presumed to have arranged the building of the adjacent streets, which still bear the names of Philadelphia, Penn, Hollister, and Callowhill Streets. Hannah Callowhill, the mother of Hannah Penn, the wife of William Penn, was a daughter of Dennis Hollister, from whom was purchased the ground on which these streets are erected.‡

Of the Franciscan or Grey Friars, which stood on the site of the Unitarian Chapel, in Lewin's Mead, no remains exist.

St. Bartholomew's Hospital, Christmas Street.—The Early English arch that formed the original entrance of

* See *ante*, p. 19.

† Other particulars are to be found in "A Book about Bristol," p. 195.

‡ Tanner's *Friends in Bristol*, 119.

this convent, and yet exists, is of an unusual character, being struck from four centres, and therefore depressed in form. On one side of the exterior is a mutilated figure of the Virgin and Child. Within the porch, on either side, is a facial arcade of the same date (13th century) as the recessed outer arch. Some remains of the walls and windows of the chapel are in the rear of the building.

A deed, dated 1386, shows the patronage of the hospital to have been vested in Lord de la War; but of the origin of the house there seems to be no particulars.

It was anciently the custom, on St. Clement's Eve, for the Mayor, Sheriff, and their fellow Councilmen, "to walk to St. Clement's Chapel, within the Bartholomews, there to hear their evensong, and on the morrow their mass, and to offer there." The house, with attached estate, was purchased at the Dissolution by the executors of Robert Thorn, and conveyed to the Mayor and Burgesses for the provision of a free Grammar School, which continued here till 1769, when the scholars were removed to Unity Street. Under the date 1574, there is a charge for the erection of a scaffold "in front of the hospital in Christmas Street," for the boys to stand on, and sing and cheer Queen Bess, as she passed through this and Host Street to the Cathedral.

Carmelites, Park Row.—The House of the Carmelite or White Friars, was pronounced by Leland the fairest of the houses of the Friars; and again he says "the White Friars' place is very fair." It occupied the site of the "great house," subsequently Colston's School, on St. Augustine's Back, which has been lately demolished to obtain building ground for Colston Hall.

The tower and spire of the church were 200 feet high. Of Bristol Carmelites may be mentioned Richard Lavingham, Confessor to Richard II., one of the most learned of the schoolmen, and author of numerous works in Latin. He was killed, in company with Sudbury, Archbishop of Canterbury, in the sedition of Wat Tyler, in 1381.

The Red Lodge, which stands on the site of part of the Carmelite garden, was built in 1590, by Sir John Young, whose monument is in the Cathedral Choir. The house was purchased some time in the present century, by Dr. James Cowles Prichard, the eminent ethnologist, whose residence, until about 1845, it became. In 1854 it was appropriated to its present purpose of a Reformatory School for Girls (of which more hereafter), by the distinguished social reformer, Miss Mary Carpenter. The drawing room is of a very splendid character of carved enrichment. The oak-panelled walls, with the architrave and mantelpiece of the same material, are loaded with sculptures of figures, trophies, flowers, and heraldic devices. Some cellarage of the old convent exists, and there is a secret room in the house, formed within the apparent thickness of the walls.

Nunnery of St. Mary Magdalen.—This stood at the foot of St. Michael's Hill, at the entrance to Maudlin Street, which derives its name from the convent. The house stood on the site of the King David Inn, which incorporates a few of its remains. These are of the Perpendicular period, and consist of a winding staircase and two or three doorways. It was founded A.D. 1173, by Eva, wife of Robert Fitzharding, who herself was the first prioress.

Chapel of the Three Kings of Cologne, top of Christmas Steps.—This was founded in 1504 by John Foster, Mayor of Bristol in 1481. The connected almshouse is for 24 poor, who receive 6s. od. per week. By an ordination of Foster's will, a priest was required to say mass daily in this chapel, during 12 years ensuing upon the founder's death, for his soul and the souls of his relations.

The almost obliterated inscription over the sedilia or cavities attached to the east end of the chapel, is to the effect that Christmas Street Steps, otherwise Queen Street, were constructed or renewed in 1669.

Holy Trinity Hospital.—On the south side of Old Market Street is the Dial Almshouse, originally an almery or guild, founded in 1402 by John Barstable, merchant, for 12 men and women. It has been rebuilt, and now maintains 22 aged widowers. Beneath the floor of the chapel lie the bodies of the founder and his wife, and over their remains is a brass with engraved figures.

On the opposite side of the street is an almshouse, founded by Isabella, Barstable's wife, for 24 aged women.

Also, on the north side of the street, is a third almshouse, founded by Alderman Stevens in 1679, for 16 widows or daughters of freemen. The interior is an oblong court, containing, at the further end, a bust of the founder, with the date 1725.

STREETS.

Temple Street.—The original buildings of the Railway Terminus, of debased Gothic design, are of no merit. The Act for the construction of the Great Western

Railway received the royal assent on 31st August, 1835, and the final opening of 118½ miles of line, from London to Bristol, took place on June 30th, 1841. The Bristol and Exeter line was opened May 1st, 1844. The Bristol and Gloucester Railway was opened July 8th, 1844.

The "Saracen's Head Inn," near the Terminus, is one of the hostelries that were confirmed and authorised in Bristol in 1606, but since that time has evidently undergone external change.

On the north side of Temple Street, disposed in a long quadrangle, are Dr. Thomas White's almshouses, named Temple Hospital. They are designed for 32 indigent people, who receive 6s. a week each. These houses were founded in 1613, but not more than ten of the present are of that date.

In a house, now removed, opposite White's Almshouses, was born (Nov. 2nd, 1636) Edward Colston, of philanthropic fame. A school of his endowment, for educating and clothing 25 boys is in this street.

The antecedents of the leaden figure of Neptune, who presides over the public fountain near the church, have never been satisfactorily explained. It is said to have been the donation of a plumber, and given to the city to commemorate the destruction of the Spanish Armada.

Thomas Street.—The "Three Kings Inn" is an old hostelry, identical with one of those licensed in A.D. 1606. The "Seven Stars," a mean looking public house in one of the branch lanes leading from this street to Redcliff Street, is mentioned by Thomas Clarkson as one, from whose landlord he gained much important information and assistance in getting up evidence against the slave trade, three or four slavers being

then in the port, preparing for their nefarious voyages.

In *Pile Street*, a mean thoroughfare leading from the Terminus to the north side of Redcliff Church, is the free school of which Chatterton's father was one time master, and where, in the master's dwelling at the back, his gifted son was born. The young poet was a posthumous child, his father having died three months before his birth, which occurred on the 20th November, 1752. The infant was baptised at St. Mary Redcliff, on the 1st of January following. His earlier education was received at the Pile Street School, but he was subsequently removed to the Bluecoat School, founded by Colston, on St. Augustine's Back. He had once affirmed to a friend that it was very easy for a person who had studied antiquity, with the aid of a few books which he could name, to copy the style of the ancient poets so exactly, that the most skilful observer should not be able to detect him; "no," said he, "not Mr. Walpole himself."

Cathay is a district south of Redcliff Church. How the name is obtained does not seem clear, but possibly its identity with the ancient name of Northern China is owing to some traders to that country having resided here. *Cathay* occurs in the Register of Redcliff Church as far back as A.D. 1603.

The *Shot Tower* on *Redcliff Hill* stands not only literally but metaphorically eminent, as being the first tower erected for the purpose of making patent shot. The letters patent are dated Dec. 10th, 1782, and were granted to William Watts, plumber, who first conceived, in a dream, the method since employed of causing molten lead to descend through a perforated frame from

a great height into water, where, having suddenly congealed, the particles are found to have assumed a truly spherical shape. The experiment was first tried through a kitchen colander. The various processes employed in shot making are particularly interesting to witness.

In "some pent up rooms on Redcliff Hill," Coleridge finished, for the press, his first volume of poems, in 1796.

Jones' Lane, a corruption of *St. John's Lane*, opposite the west end of Redcliff Church, denotes the site of the small Hospital of St. John, where King Henry VI., with Margaret of Anjou, took up their temporary abode when at Bristol, in 1446. At the end of the lane is the Quakers' burial ground, which is colonised by many departed "friends," whose underground lodgings have only the initials of their occupants above the green turf. The red rock, which gives its name to the district, here boldly crops up, and, excavated at one point is the ancient hermitage of St. John the Baptist, consisting of a single chamber, with an Early English arch at the entrance.

In *Redcliff Street*, the house of most antiquarian interest is that known as Canynge's, now occupied by Mr. C. T. Jefferies, the well-known bookseller. It was built about the middle of the 15th century by the second William Canynge, and was doubtless a residence, with a chapel incorporated. The chief remains are a "Perpendicular" hall, with a high pitched ornamental roof, with a louvre in the centre. In 1500 this house was the residence of Thomas Brooke, steward of Henry VIII., whose tomb, inlaid with brass, is in Redcliff Church. Behind the hall is an apartment with a highly-enriched renaissance fireplace, and other carved decorations. The original floor of encaustic tiles is yet

preserved. By the liberality of the occupier, this interesting mansion is accessible to any respectable visitor.



Bath Street was opened in 1792, its site being provided by the curtailment of Thomas and Temple Streets, and by the sacrifice of the greater part of Tucker Street. This latter was so called from its being entirely inhabited by clothiers or drugget makers, one of the ancient manufactures of Bristol. The weaving of cloth was brought from Normandy to Bristol, and

clothmakers were called Toukers, from the German *tuch*, cloth, hence *tucking* mill, common in Somerset.

At No. 2, *Bridge Parade* (on the right to the approach to Bristol Bridge from the Temple railway) lived Burgum, the pewterer, to whose name his de Bergham ancestry, as elicited for 5s. by Chatterton, gave a meretricious gloss, even as lustrous as the sheen from his own pewter plates. Burgum's partner in trade was George Catcott, and it may be inferred that it was at their shop here, that Johnson and his satellite Boswell called on Monday, April 29th, 1776, to talk about the sad story of Thomas Chatterton, whose brief career had, a few years before, so disastrously concluded. The house on Bridge Parade was being rebuilt at the time Chatterton waited upon Burgum, and is now a seed shop. On the same, or the adjoining, spot, towards the old bridge, was the mansion of the Rogers, one of whom, Sir Richard, here entertained, in 1663, King Charles II. and his Queen, James, Duke of York, Prince Rupert, and several noblemen. At the opposite side of the way was Sir Thomas Day's "great house," where Queen Anne, with Prince George, was, in 1702, entertained.

In one of the gabled houses of the picturesque old bridge was born, in 1546, Tobias Matthew, Archbishop of York, who, in after life, remembered his native place by the donation of many books to the City Library: His general character has received, perhaps, more praise than blame; though, on the score of humanity, it might be deserving of more blame than praise. Indeed, there seems to have been a very strong element in his disposition towards making a Protestant Bonner; and it was rather the lack of a

sufficient hand than of a willing heart that he did not exact the blood of the proscribed priests who still celebrated in secret the sacraments of the Church of Rome. By an act passed in 1585 (27 Eliz., cap. 2), all "Jesuits, seminary priests, and other priests," were commanded to depart out of England forthwith; and anyone receiving or relieving a priest, or hearing mass, was adjudged to be guilty of high treason, without benefit of clergy, and was to "suffer death, lose and forfeit, as in case of one attainted of felony." Matthew, when Dean of Durham, A.D. 1593, writes to thank Lord Burleigh for the favourable reception of a letter he had written to his lordship, to express his "readiness against seminary priests." It appears that one Boast, a spy and informer, had incurred censure from the authorities for "slackness in his proceedings" in priest hunting. But in apology for this shortcoming, Matthew, in his defence of "so grave, learned, and reverend a man," says, "full little knows the one what the other may be forced sometimes to forbear to do." "I know," he adds, "the man well, and have known him long. He is very honest, learned, sound, and painful in his charge. He, with his own brother and curate, seven year's since, not without danger of life, apprehended Bernard Pattenson, the first seminary priest that ever hand was laid upon hereabout, with Thomas Trollope, a base-begotten, desperate, and dangerous fellow, who carried in a cloak bag, on his horse behind him, the priest's massing vestments, books, &c. The priest and his man he carried to York, upon his own charge, where Pattenson broke the castle, and made his escape. Trollope being indicted here afterwards, upon that felony, still remains in Durham Castle, unexecuted, I

see not how.”* It was evidently not with Dean Matthew’s approval that Trollope was “unexecuted.”

Before Matthew’s translation to York, he became Bishop of Durham, and during his prelacy, one Anthony Arrowsmith, who held lands at Eggleston, refusing to plead, his estates became forfeited to the bishop, he being “pressed to death” in prison, that is, a heavy weight was placed upon his prostrate body, and he was starved to death.† We should have liked the bishop’s character better had he refused to touch estates that had been so cruelly obtained; but so far from rejecting them, there being yet some legal obstacle to the grant, he maintained a suit in the exchequer to recover the land.‡ He was very unfortunate in his three sons. One, he says, had grace without wit, another, wit without grace, and the third was witless, thriftless, and graceless.

Also, on old Bristol Bridge, was born A.D. 1613, Dr. William Thomas, Bishop of Worcester. He was a man of unblemished piety, and while his health lasted, was always at Cathedral service at six o’clock in the morning, and was never known to have been in a passion. When Dean of Worcester, one of the Prebendaries in Chapter, having displayed great warmth of temper, the Dean exclaimed to him, “Brother, brother, God give you more patience,” to which the angry gentleman replied, “Mr. Dean, Mr. Dean, God give you more passion.”

The curious old pargetted house, where High Street

* Dom. Cal. Addenda, Eliz., 356. “To have been at mass was treason, and to receive priests, felony.” Note by Att. Gen. Coke.

† See Hart’s Eccles. Records, p. 365, or “Book about Bristol,” p. 305.

‡ Hutchinson’s Durham, 266.

turns into Wine Street, is said to have been brought in pieces from Amsterdam, and here set up. A grotesquely carved bracket in the lower storey, within the shop window, bears the date 1676.

The house that stood on the opposite corner, adjoining Corn Street, has been rebuilt, but the spot will remain a classical one, for here stood the shop (now Hayward's, bookseller) of Joseph Cottle, the publisher—

Cottle, not he by Alfred made famous,
But Joseph of Bristol, the brother of Amos.*

who, in 1796, issued from his press the earliest edition of Coleridge and Southey's poems, in two separate volumes, for each of which he paid 30 guineas. In Cottle's parlour here, Wordsworth first committed to paper his grand poem on "Tintern Abbey," and Coleridge wrote part of his "Religious Musings" in the same room.

Under the shop, No. 22, here in High Street, is a fine vaulted cellar. Opposite, against the parapet of the house next above Burdge's, chemist, is a beautifully designed snow-box and shoot, bearing the date 1686.

At the top of High Street we are at the central point of the ancient town. At the spot where the four streets intersect, the High Cross stood for five centuries, until a timid tradesman of one of the neighbouring shops complained of its being shaken by the wind, and threatening to fall upon his house, which occasioned its removal to College Green, and ultimately from Bristol.

* Don Juan.

The High Cross is first mentioned in the Civic Annals in A.D. 1247, and is described as being the place where the market was held. It was re-erected in 1373, and within its niches were placed statues of John, Henry III., and Edward III., to which afterwards was added Edward IV. Here, as we have already intimated, in the troubled reign of Richard II., were executed Lord William Scrope, Earl of Wiltshire, Sir Henry Green, and Sir John Bushey, three of the most favoured courtiers of that weak monarch. It will enhance the interest of this spot when we remark that the scene of Shakespeare's "Richard II.," which describes Bolingbroke's merciless vengeance upon these unfortunate minions of an effeminate king, is associated with the carved symbol of man's redemption that here stood.

In the year 1400 the High Cross witnessed the sacrifice of another illustrious victim to the hopeless cause of Richard II. This was Thomas de Spenser, great grandson of Hugh, who suffered at the Castle in the year 1326. Having entered into a conspiracy to dethrone Henry IV., he was thwarted in his design by his army perfidiously taking to flight. Henry wished to have an interview with him before he was put to death, but a multitude assembled and called aloud for the traitor to the king and realm, that he might be brought out to execution. The mayor in vain endeavoured to oppose them; they dragged their victim forth and beheaded him in the market place. His head was put upon London Bridge: his body was buried in the choir at Tewkesbury, under a lamp that burned before the Host.

At the High Cross Henry VII. soon after his coronation was received with much pageantry; and in 1574

"Fame" in the form of an "excellent boy" having repeated here in the presence of Queen Elizabeth some verses hardly up to the mark of his name, "flung up a great garland to the rejoicing of all beholders." The Cross was removed to College Green in 1733, and finally to Stourhead, in which beautiful grounds it yet stands.

At right angles with High Street is Corn Street. On the site of the Council House stood St. Ewen's Church, which had its chancel end in Broad Street. From the east window of this destroyed church Edward IV. witnessed the procession that conducted Sir Baldwin Fulford to execution. Fulford may be remembered as the subject of a pathetic ballad by Chatterton, his punishment being the remorseless exaction of the penalty of being answerable for the surrender of a perfidious friend, who like himself had favoured the lost Lancastrian cause. In a niche between the windows of the Council Chamber of the Old Council House, was a statue of Charles II., which the Duchess of Cleveland pronounced on her visit to the place, to be more like a clumsy porter placed there to keep the entrance than a crowned monarch. A Council House of more modern style was erected in 1704 on the site of the old, and the statue was then placed against the Guildhall, within the precincts of which building it is still preserved. The present, the third Council House, was built in 1821 at the expense of £14,600. The stairs are inlaid with brass devices. The Council Chamber should be visited for the sake of the interesting portraits of national and local celebrities.

Among these portraits may be seen that of Lord Burleigh (died 1598); this cost £3. King Charles I.,





by Sir Anthony Vandyke, and the Earl of Pembroke by the same hand; of this latter there is the following note under the year 1627, "paid the picture maker for drawing the Earl of Pembroke, £3 13s. 4d. The family are stated to have offered to purchase this picture by giving as many sovereigns as would cover its surface. King Charles II., King James II.—for these John Hoskyns, the artist, was paid £10 5s. James II. by Sir Godfrey Kneller. William and Mary, for which Mr. More was paid in 1681 £13 8s. Queen Anne cost £24 15. George I. and II. and Queen Caroline. Lord Ashburton, by Sir Joshua Reynolds, who was paid for £105. The Duke of Portland, by Sir Thomas Lawrence—this with the frame cost £149. George III., by E. Bird, R.A. Other and principally local portraits are Thomas White, Mayor in 1529; Robert and Nicholas Thorne; Sir Thomas White; Robert Cecil, Earl of Salisbury, who died in 1612; Alderman Whitson; George Harrington, mayor in 1617; Charles, Earl of Dorset (1691); Edward Colston; Sir Michael Foster; Lord Clare, and Sir Vicary Gibbs.

On the site of the West of England Bank stood the "Bush," in the old coaching days a city inn of first importance. It was at the "Bush" that Mr. Winkle took up his quarters in his love lorn quest of the missing Arabella Allen, who was surmised to be hidden somewhere in Bristol or the neighbourhood.

An engraving in Barrett's "Bristol" exhibits against the street side of All Saints' Church, in Corn Street, a covered colonnade known as the Tolsey. This, till superseded by the Exchange, served as a "Rialto" for merchants to transact their business, and many a venturesome enterprise on great waters has on this spot

originated. The names of John and Sebastian Cabot, the Canynges, Sturmy, Thorne, and other navigators and merchant princes, who here discussed their projects and recounted events, are sufficient to indicate the interest of the spot. The fame of Bristol Tolsey was known to Sir Walter Scott, and in "The Pirate" the captain of the "Good Hope" of Bristol, tells Mordaunt of the fine luck his vessel had on the Spanish Main, both with commerce and privateering, and adds, "My name is Clement Cleveland, captain and part owner, as I said before: I am a Bristol man born—my father was well known on the Tolsell—old Clem Cleveland, of the College Green."—"Pirate," vol. i. chap. viii.

The brazen tables in front of the Exchange formerly belonged to the Tolsey. They were used by the merchants there assembling for making payments, writing letters, &c., and from their form were sometimes called nails, which is said to have given origin to the frequent phrase to "pay down on the nail." The dates inscribed are severally 1594, 1625, and 1631, one, and apparently the oldest, being undated.

The Exchange, built 1740, is a greatly-admired piece of architecture, by Wood. The street front is of the Corinthian order; the interior is a fine quadrangle with colonnades. The cost of building was £50,000. Corn market on Thursdays.

Nearly opposite are the Commercial Rooms, which were designed by C. A. Busby, and opened in 1811, and Small Street, now for the most part occupied by public and private offices, but which at one time contained the residences of the most dignified townsmen. Of these was Edward Colston, whose house stood upon the site of the Assize Courts, included in which are the relics of

some of the most ancient domestic architecture in Bristol. These remains are of the 12th century, and may be found in the Law Library. They consist of some clustered piers, with cushion capitals, of a grand Norman hall, divided by two ranges of arches.* Several richly carved Renaissance chimney pieces are also preserved; and at the rear of the building is retained a beautiful range of panelled windows rising in three stages, of Tudor Gothic. The house known as the Elizabethan hall opposite the office of the Bristol Water Works contains, within a modern frontage, a highly enriched apartment of the 16th century, which exhibits a sumptuously carved fireplace, and a cross-ribbed, deep-moulded ceiling with bosses and pendants at the intersections. In this street lodged Robert Dudley, Earl of Leicester, the most favoured, at one time, of Queen Elizabeth's favourites. Charles I. with Prince Charles and the Duke of York, was entertained here, in 1643, by Colston, at the house first mentioned. The war beaten visage of Oliver Cromwell might also have been seen during many days in Small Street. In 1677 Queen Catherine dined here at (quondam) Colston's house, her host being Sir Henry Creswick. Charles II. and James II. lodged at No. 21, which adjoined Colston's residence, the latter being known as No. 20 until partially incorporated in the Assize Courts. At a later date the mysterious Johanna Southcot had apartments and a chapel in Colston's house, and the exact spot identified with her ministrations is pointed out by Mr. Benjamin Wilson, the very intelligent clerk of the School Board.

A writer in the *Builder* characterizes the New Post

* See Parker's Dom. Arch., iii. 387.

Office as "a piece of threadbare classic design that might have come from the Board of Works." Many persons have a more favourable opinion of its merits, which, however, are certainly of no striking originality. All nationality of style must be considered renounced when buildings so incongruous in architectural design as the New Post Office and new Assize Courts are erected face to face at the same time. But our cosmopolitan feeling and reach, which include all foreign introductions and reproductions, are perhaps a somewhat qualifying reason for saying all things are ours, even the architecture of all nations, and countries, and times.

Before the institution of mail coaches, messengers were employed to convey letters. In the King's book of payments is an entry dated in the 11th year of Henry VIII, of 13s. 4d. paid to Richard Dynes, for riding from Greenwich with a letter to Mr. Baynton, near Bristol (Redland) for a greyhound for the King.* Now, that the letter of the peasant posts faster than did then the commandment of a king, it may be interesting to notice that on May 18th, 1666, it was ascertained the mails by the Bristol road travelled at the rate of four miles an hour. Also, by observation it was found that on November 23rd, 1666, the mail starting from London at 2 a.m. reached Bristol at 5 a.m. of the following day, and being despatched from Bristol at 1 a.m. on the 25th returned to London on the 26th at 7 a.m.† The official rate of speed was finally increased to ten miles an hour; and Lord Chancellor Campbell relates that he was frequently warned against travelling in the mail

* Lewin's "Her Majesty's Mails," 341.

† Cal. St. Papers, 1666 67, p. 388.

coaches improved by Palmer, which were first tried on the London and Bristol road, on 8th Aug., 1784, on account of the fearful rate at which they flew, and instances were supplied to him of passengers who had died suddenly of apoplexy from the rapidity of the motion.*

Running parallel with Small Street, in a line with High Street, is *Broad Street* which though one of the original streets has no antiquities to show. The Guildhall is a modern structure in the Tudor style, erected in 1846, on an old site. The earliest mention of the ancient Guildhall occurs in 1313, when it became the centre of a furious outbreak of the citizens against the military of the Castle, consequent upon the appointment of certain officers by the king (Edward II.) to control the privileges of the burgesses, the authority of which officers was repudiated by the people. Nearly twenty persons were killed within the building, and many were seriously injured by leaping from the battlements and windows to effect escape. This was tragedy in earnest; but tragedy in less formidable character was also represented within the same precincts, histrionic actors under the protection of certain noblemen being hired by the magistrates to herein exhibit their professional talents before the townspeople. The Lord Chamberlain's Company, to which Shakespeare was attached, occasionally performed here, and it has been ascertained by Mr. Halliwell that they visited Bristol in 1597, which was a time when Shakespeare was a leading actor. In 1685 the terrible Judge Jefferies opened here his sanguinary commission, the result of which was that six men were condemned and executed on

* Lewin, 82.

Redcliff hill, for alleged conspiracy in the Monmouth Rebellion.

Wine Street instead of deriving its name from some relation with the fruitage of the vine, is a misnomer for *Wynch* Street, that being the term of the Pillory or Collistrigium which once stood here. *Wynch* means a tourniquet or a windlass, as a "Winchwell," and the instrument of punishment was so named from being placed on a turning beam.

At the entrance to the *Guardhouse Passage* is a fine Decorated gateway, formerly belonging to the residence of William Yate, Mayor in 1596. The carved device of a gate, with the initials W. and C.B. on the brackets of the bow window over the arch is a rebus of his name. Opposite is the "Plume of Feathers," which was known as a hostelry in 1629, and preserves much of its original appearance. At the "Horse Shoe," once standing in Wine Street, Samuel Pepys made his first halt on his visit to this city in 1666. The house where Robert Southey was born (12th August, 1774) still exists, being No. 9. In a visit to Bristol, Jan. 22, 1831, the poet remarks that he called at "Messrs. Goss and Fowler's, 9, Wine Street," to request permission to look over the house in which he was born.

Branching off from the north side of the street is the *Pithay*, so called from the Norman *Puit*, a wall and *Hai* or *Hey*, a hedge or enclosure of stone. Peering out into Wine Street is a picturesque gabled house that shows evident traces of former dignity upon its ornamented front. The Pithay is a sort of local Seven Dials, and a curious rag-fair assemblage of shops is to be seen by a prying eye. The Baptist Chapel here situated was built about the year 1653. It is now disused.



WINE STREET, SHEWING HOUSE WHERE SOUTHEY
WAS BORN.



Opposite the entrance to the Pithay is an avenue into *St. Mary-le-Port Street* one of the most characteristic thoroughfares of the old town. The "Swan" inn, at the south east end of the street, has a good ornamented barge board of the 15th century; other portions of the structure are of Tudor date. Some of the houses have the Brewers' Arms embossed on their front. The dark, overhanging tenements attached to the north aisle of the church have held their ground during at least three centuries. At the "Lamb" inn, one of these houses, the patriotic burghers of 1588, doubtless discoursed, over their brimming cups the news of the defeat of the proud Philip's Armada at the very time when England rung with the first intelligence of the momentous victory. In the Church records is an entry under the date 1580, 20th April, "Item, payd at the Lambe, xviiijd.

At the south west corner of *St. Peter Street* is St. Peter's Pump, over the well of St. Edith. The well was sunk and surmounted by an openwork cross in 1474, by Spencer, Mayor of Bristol. The cross was rebuilt in 1633. It is now at Stourhead in neighbourhood with the Bristol High Cross.

In the accounts of St. Peter's Church is a charge of 1s. 6d., A.D. 1662, for "pullinge down of a May Pole put up at St. Peter's Plump."* One might as soon expect to see a Maypole again overlooking the Strand as to see one now in the restless heart of Bristol.

In 1664 is an entry relative to Charles II. and his Queen passing in procession by the same fountain.

* This is the almost invariable way, fifty times repeated in the accounts of St. Peter's, Christ's, and other churches, of spelling the etymologically disputed word "pump." Also a pump maker is called a plumper.

“ Paid Henry Hore, free-mason for mending the free-stone work over the plump against King Charles and Queen Katherine came to the city, for setting two new arches over the pictures, and other work done as by his note appeareth, £ 1 3s.”*

St. Peter's Hospital, adjacent to the church, is, with its gabled frontage and profuse arabesque enrichments, a strikingly picturesque mansion. The earlier building, of which the eastern portion of the present structure is a part, is identical with that inhabited by Thomas Norton, who was reputed the most skilful alchemist of his time. Here, close to the historical bulwarks of the castle, and beneath the shadow of the dark grey Norman Church, we may picture the old enthusiast, with long beard, and eager, glittering eyes, poring over his beach coal fire, and essaying with crucible and alembic, sulphur and quicksilver, to “ hatch gold in the furnace as they do eggs in Egypt.” Instead, however, of finding Peru in Bristol he is declared to have impoverished both himself and those of his friends who were so credulous as to entrust money to him in order to help his researches. He wrote several works on the Philosopher's Stone and kindred subjects.† The mansion passed from the Nortons in 1580 to the Winton family, of Barr's Court, and in 1607 it was purchased by Robert Aldworth, merchant, who reconstructed the chief part, including the ornate frontage (except the east end) which we now see. The date

* The writer expresses his best acknowledgments to the Rev. Mr. Harding, the vicar, and Messrs. Randal and Beebee, the wardens, for their kind permission to make extracts from the church papers, which space allows here to quote only in the most limited manner.

† See Bale, xi. 66 ; Pitseus, 666 ; Tanner, 550 ; Evans, 114 ; Fuller's Worthies, iii. 35 ; Lucas' Secularia, 121.

1612 is on the river front. In 1695 a mint was established here, which ceased to work after the coinage of £40,000,000.* In 1698 it was converted into a work-house for the poor. The "court room" is highly enriched, the fireplace being a fine mass of Jacobean carving, and the ceiling and windows are in rich keeping.

The first medical man who offered gratuitous services (A.D. 1696) for the poor under the care of the guardians in this city was Dr. Thomas Dover, the inventor of the powders still sold under his name, and whose efficacy appears to be not even yet obsolete. In Stanley's "How I found Livingstone," is an engraving of "The Makata Swamp," a terrible marsh of 30 miles extent, through which the explorer and his black company splashed and plunged through shallows and depths for two days, the effect of which painful toil was to occasion the soldiers and pagazis to sicken of numberless diseases, and to throw Stanley himself into an acute dysentery. "My own confidence in that compound" he says, "called Collis Brown's Chlorodyne, delayed the cure which ultimately resulted from a judicious use of Dover's Powder" (p. 140). Dr. Dover, also, was one of the commanders of the "Duchess," that brought home Alexander Selkirk.

The "Star Inn," *Cock and Bottle Lane*, Castle Street, stands on the site of the Norman keep of the Castle. On this spot King Stephen lay in chains. The "Star" was a house frequented by Daniel Defoe when in Bristol, the club room being still in existence where he used to meet his literary friends.

At 3 *Narrow Wine Street* was born Matthew Was-

* Evans, 249.

brough, the rival of James Watt in the invention, or rather the application of the crank and fly wheel to the steam engine.

The "Cat and Wheel" (Catherine Wheel) once at the entrance to Castle Green, is a quaint looking hostelry of 17th century date.

Castle Green Chapel was rebuilt in 1815. The congregation germinated on this spot as early as 1633, when meetings were held at the house of a carpenter within the precincts of the Castle.

Merchant Street is called by William Worcester, *Marshal Street*. It was a military way from the Castle to Kingsdown, which was the arena for military exercises and tournaments. We have before adverted to the interesting remains of the Dominican Priory in this street. The almshouse of the Merchant Tailors' will also attract a glance. There are nine decayed tailors or their widows, the allowance to each inmate being 7s. a week.

The Tabernacle, Penn Street, was opened in 1752 by the Rev. George Whitefield, the Earl of Chesterfield, of epistolary fame, being, in compliment to the reverend orator, one of the donors towards the erection of the building. In 1771 the Rev. Rowland Hill began his preaching career in this chapel.

In *Redcross Street* stands the house (No. 6) where in 1796 was born Sir Thomas Lawrence, whose portraits comprise a constellation of crowned heads.

The "Lamb Inn," *West Street*, is a spacious hostelry bearing the date 1651. At this inn the fanatic James Naylor (celebrated by Carlyle) slept on his ill-starred entry to Bristol, Oct. 24, 1656.

From *Newfoundland Street* some of Coleridge's

letters are addressed. The chapel here was adopted about 1809, by an antinomian section of the congregation of the Tabernacle. The first preacher here was the extraordinary William Huntington S.S. (*i.e.* sinner saved) who is the subject of an article by Southey in the *Quarterly*.

Having considered the central and northern, and eastern districts of the town, we will now return towards Bristol Bridge and touch upon the localities southward and westward.

Baldwin Street retains nothing of interest except its traditions, of which the one most worthy of notice is that Henry II. here received his early education, under the care of one Matthews.* A chapel, dedicated to St. Baldwin, once formed a part of the extensive messuage now called the Back Hall, but formerly Spicer's Hall.

On the *Welsh Back* exists a beautifully carved timber door, with panelled side posts and spandrils, of the Decorated period, which is now the sole remains of Spicer's Hall. Richard le Spicer was Mayor in 1371, and the style of this ancient relic of his mansion corresponds with that date. The premises of Messrs. Franklyn, Davey, and Morgan, No. 12, Welsh Back, include a boldly carved staircase, and a splendidly enriched drawing room, with other remains of a fine mansion, showing evidently the residence at one time of some rich merchant. There is no prescriptive account of the house, but over the fireplace in one of the rooms is a shield with a monogram, which, together with the initials J. L. (and the date 1623), denote it to have been the abode of the Langtons.

The lofty brick-built granary of Messrs. Wait and

* Hollinsed—Stow—Seyer, 442.

James, at the south-east entrance to Queen Square, is particularly conspicuous in its ruby tints, and is a very successful work of its kind. The height is 100 feet. Architects, Ponton and Gough. Cost £6000.

King Street, in the Marsh, was built in 1664, and it still retains many of the original houses. The "Llandoger Inn," and the adjoining tenements, are evidently referrible to this date. Opposite these is the Coopers' Hall, erected in 1744; it presents rather a good frontage of the conventional Grecian pattern. Adjoining is an almshouse, erected in 1652, on ground next the then city wall. It is supported by the Corporation for the benefit of the parish poor. The City Library, in the same street, was established in 1614. In 1740, the present Library, without the wing, was built, at an expense to the city of £1301 8s. 1d.

The Theatre, in King Street, was opened in 1764. David Garrick, who surveyed the building before it was quite finished, pronounced it to be "the most complete of its dimensions in Europe." Among distinguished actors who have played here may be mentioned William Powell, Shuter, Mrs. Siddons, Mr. and Mrs. Charles Kemble, C. M. Young, and Macready.

The Merchants' or St. Clement's Almshouse, adjoining the Merchants' Hall, is a neat little quadrangle, built on land where formerly stood a chapel to St. Clement. There is accommodation for about 30 men and women, poor sailors, or sailors' widows and daughters. The Society of Merchants contribute largely to its support.

Opposite the Almshouse is an old panel-fronted, gabled house, where once resided John Romsey, Town Clerk at the time of Judge Jefferies' sanguinary visita-

tion, and where, 23rd September, 1685, he entertained that amiable administrator of the law.

The Merchant's Hall was rebuilt in 1701. It contains portraits of eminent merchants of Bristol, also one of Queen Anne, by Kneller.

The ground now occupied by *Queen Square*, so called from Queen Anne, who visited the city (18th May, 1702) while the houses were being built, was, in former days, called the Marsh, a name still preserved by the nomenclature of Marsh Street and Canon's Marsh. The bronzed equestrian statue of William III. was erected in 1735, after a model by Rysbach, and cost £18,000. At No. 15, Queen Square, the famous David Hume served a brief clerkship. He says:—"In 1734, I went to Bristol with some recommendations to eminent merchants, but in a few months found that scene totally unsuitable to me." The traditional reason of his summary departure was his presuming to correct the style of his employer's (Mr. Miller's) business correspondence. "I tell you what, Mr. Hume," said the successful merchant, "I have made £20,000 by my English, and I won't have it mended."*

At No. 19, on the same side (the south) of the square, once resided Capt. Woodes Rogers, who discovered Alexander Selkirk, the original Robinson Crusoe, at Juan Fernandez. The same house has a farther interest in being that where Burke lodged in 1774, his entertainer being Mr. Joseph Smith.† On the east side of

* Lord Hailes remarks:—"Dr. Tucker, Dean of Gloucester, confirmed what I had formerly heard, that the master of David Hume, at Bristol, quarrelled with him for correcting errors in the style of his letters."—Hist. MSS. Com. Rep., iv., 532.

† Owen's Ceramic Art, p. 95.

the quadrangle was born, in 1751, Sir Nathaniel Wraxall, whose gossiping and somewhat scandalous memoirs have lately found a counterpart in those of Mr. Grevile. The whole of this (east) as well as the south side of the square has been rebuilt, in consequence of the original houses having been burnt down in the riots of 1831. The area of the square is stated to be just that of the great Pyramid.

In the broad open space of *Prince's Street*, south of Queen Square, John Wesley frequently preached. The Assembly Rooms, once a fashionable concert hall, resounding with the merry music of harp, sackbut, and psaltery, has long lost caste, and *Cithara tollat curas*, the inscription on the forehead of the building, is only suggestive of the sweet memories of its past experience.

Leaving the Quay to the left we proceed through *Marsh Street*, where, Samuel Pepys tells us, his wife's "pretty maid," Deborah Willett, was born, and where the quaint old diarist visited her parents. The north end of Marsh Street opens into *Clare Street*, built in 1770, and named from Nugent, Lord Clare, who then represented the city in Parliament. At the house occupied as a drapery establishment by Messrs. Wintle, opposite the porch of St. Stephen's Church, was born, in 1793, Edward Bowdich, the Ashantee traveller.

Colston Hall, on *St. Augustine's Back*, stands on the site of the Carmelite Friary, which being abolished, was superseded by what was known as the Great House, where resided Sir John Young, who here received Queen Elizabeth and her court. In 1642 the house was inhabited by Sir Ferdinando Gorges. The Prince of Wales (Charles II.) slept here in 1645; also, on one occasion, his mother, Henrietta Maria; and, in 1687,

James II. and his queen were guests in the same mansion. The old house was sold to the Colston Hall



Company, who took it down for the purpose of erecting the present spacious hall. This was opened September 20, 1867. It is 150 feet long, 80 feet wide, and 70 feet high, and affords seats for 2,500, beside orchestra accommodation for 500 more. Opposite Colston Hall was a large red brick house, once the family mansion of the Fanes, Earls of Westmoreland. This has been lately destroyed.

In approaching *College Green* it will be confessed that the picture presented to the eye is singularly effective. St. Augustine's Church, the High Cross, the Cathedral, the Norman gateway of the Abbey, the Mayor's Chapel,

the tree-shaded walks and greensward, together with the new hotel and handsome houses and shops, and the noble but acclivitous back ground of Park Street, combine to form an architectural tableau of which any city might be proud, and is a promising introduction to the picturesque suburb of Clifton.

On the site of the corner house, No. 7, nearly opposite the east end of the Cathedral, lived Mrs. Frances Ruscombe, who was mysteriously murdered, together with her maidservant, in open day, by some miscreant, whose identity was never ascertained. Their tragic fate has gained a somewhat classical notoriety from its forming an illustrative instance in De Quincey's strange paper on "Murder as one of the Fine Arts." This double murder occurred, between one and two o'clock, on Tuesday, 28th September, 1764. The house was robbed, Mrs. Ruscombe was found with her throat cut, and her maid with her head almost severed from her body. A large reward was offered for the discovery of the murderer, but no clue was obtained.

Erected upon the north cloisters of, and attached to, the former west end of the Cathedral, was the Minster house, where was born, in 1758, the beautiful and unfortunate Mary Robinson, otherwise "Perdita," who was playing that part in the *Winter's Tale*, when she attracted the attention of the "first gentleman in Europe," *alias* Florizel. In her 24th year, while travelling during the night in an open chaise, she induced a malady that terminated in a violent rheumatism, which deprived her to the end of her life, in 1800, of the use of her limbs, insomuch that she was obliged to be carried about by an attendant.

At No. 48, *College Street*, lodged, in the year 1794, Robert Southey and S. T. Coleridge, who were then in ardent meditation on their utopian scheme of Pantisocracy, or universal brotherhood.

In 1795, Coleridge abode at No. 25, *College Street* "one pair of stairs room." At No. 58, resided Mrs. Martha Fricker, Sara Coleridge's aunt. (See Life of Sara Coleridge).

The portico of the quondam Philosophical Institution (erected in 1820) is much admired for the classic purity and beauty of its design. The general contour is adapted from the Roman Temple of Tivoli, but the proportions are considered to be Grecian. The alto-relievo frieze is from the exquisite hand of E. H. Baily, who liberally presented this fine specimen of his sculpture to the Institution. The subject is thus described:—"The Arts and Sciences and Literature are introduced by Apollo and Minerva to the City of Bristol, who, seated on the Avon, receives them under her maternal protection, and dispenses to them encouragements and rewards, while Plenty unveils herself to Peace, since under their happy influence those expansions of the human intellect flourish and improve." The entire cost of the building, including £646 for site and conveyance, and £500 architect's fee, was about £11,500. The premises are now occupied by the Freemasons as their central lodge.

In *Trenchard Street*, behind the Colston Hall, is the Jesuit's Chapel, the oldest Roman Catholic Chapel in the city. From the Reformation until the accession of George II., the Roman Catholic faith showed but little signs of life in Bristol. Whether only dormant or scarcely existent during that period, there appears to be

but very limited published record to indicate, for Dr. Oliver, who had unusual facilities for acquiring information on the subject, gives scarcely any. That the exercise of the Romish worship in public, or even the administration of the mass in private dwellings, was penal, there is various evidence to show. M. Jorevin, who visited Bristol in the reign of Charles II., relates : "The Fleming at whose house I lodged, long kept a priest, who secretly said mass in his house; but it having been discovered, he was forbidden to do it, so that at present one cannot hear mass at Bristol, although it is a port frequented by many Catholics, Flemish, French, Spaniards, and Portuguese." In the autobiography of Sir John Bramston, is this incident related : "On Sunday last, April 25th, 1686, at Bristol, information being given to the Mayor that mass was sayinge in a house in that citie, he took with him the sheriff and some aldermen, and went and apprehended the priest and the conventicles, and committed the priest and some of the company to the gaole, and sent to the bishope, Sir Jonathan Trelawney, notice of it. His lordship carried the letter to the king." It is afterwards stated that the priest was brought before the King's Bar on 10th of May; but, owing to the absence of the Lord Chief Justice, he was remanded to the King's Bench Prison, where we lose sight of him. About 1743, a Bristol firm, anxious to introduce spelter, or zinc-working from Flanders, could not induce any of the Flemish workmen to come over, unless the free exercise of their religion were secured to them. This concession was obtained, and the men were allowed to practise their religion without molestation.

That "the Jesuits were the first to create and serve

the Bristol Mission is a fact," says Dr. Oliver, "that I believe no reasonable man can doubt." St. Joseph's Chapel, Trenchard Street, still held by the Jesuits, was the first distinct building erected for the public worship of the Catholics. This was opened by Father Thomas Plowden, in 1790. The Roman Catholic pro-Cathedral in Meridian Place, was begun in 1834, and the first mass was said in 1842. In 1843, the church of the Irvingites, on the Quay, was purchased for £5000, the expense of its erection having been £15,000.

In Trenchard Street Chapel lies interred the last male descendant of Sir Thomas More. He was born in 1722, and he died in 1785. Also here lies Patrick Cotter, the Irish giant, whose prostrate form extends over more than eight feet of ground. His stature is variously stated at gradations from eight to nine feet; the coffin plate states eight feet one inch, and his memorial tablet eight feet three inches. He died in 1806, aged 46.

Christmas Street was so called by William Worcester (born A.D. 1415), who says it was otherwise named Knife or Knight's Smiths Street, of course for being inhabited by the cutlers and armourers. The arched entrance to the old religious hospital of St. Bartholomew we have already adverted to.

From Christmas Street we pass into *Lewin's Mead*, or, as it is called in deeds of the 14th century, Lowan's Mead. Here are still many quaint and picturesque houses, but the street has suffered much demolition of recent years. The Unitarian Chapel, long under the gifted pastorship of the Rev. William James, stands on the site of the Franciscan Priory. The founder of the Lewin's Mead congregation was Mr. John Weeks,

who had been ejected from Buckland-Newton. The first chapel was built about 1693. The present structure was erected about 1790. While the work was going on, the congregation assembled on one part of the Sunday in the Independent Chapel, Bridge Street, it being customary for the Dissenters of Bristol, though differing widely on points of doctrine, to accommodate each other. In John Wesley's Journal, under the date 1790, Saturday, 25th October, we find "Mr. Hay, the Presbyterian minister of Lewensmead Meeting, came to desire me to let him have the use of our preaching-house on Sundays, at those hours when we did not use it ourselves (near ten in the morning and two in the afternoon), while the house was re-building. To this I willingly consented, and he preached an excellent sermon there the next day at two." Many years afterwards the Lewin's Mead Society lent their place of worship for several weeks to another Independent congregation, meeting in Castle Green; but when, more recently, the Unitarians applied for the loan of the Castle Green Chapel in return, the accommodation was denied.*

The Lewin's Mead Chapel has three aisles and three galleries, and is capable of seating 1000 persons.

On *St. James's Back*, a (now) grimy old street, leading from the north end of Lewin's Mead into Broadmead, was born, in 1415, the quaint antiquary, William Botoner, or Worcester. He was an earlier Leland, and, like him, having little imagination, he delighted only in meagre facts, these being mostly of a topographical or historical character. In his declining age his residence was adjoining St. Philip's Churchyard, where, like Friar

* Murch, 358.

Lawrence, he cultivated medicinal herbs, finding as well as he that

“ Mickle is the powerful grace that lies
In herbs, plants, stones, and their true qualities.”

Broadmead Baptist Chapel, whose interesting records have been published by the Hansard Knollys Society, is distinguished by its pulpit having been successively occupied by two such gifted pastors as Robert Hall and John Foster. The first regular preacher here was Mr. Hardcastle, Vicar of Bramham, in Yorkshire, who relinquished his living by compulsion of the Act of Uniformity, and afterwards became a Baptist. He was appointed here in 1671.*

St. James's Upper and Lower Arcades were built in 1825. These are the Bristol Holywell Street for old bookstalls.

Intersecting the Arcades is the *Horsefair*, the portion of which fronting St. James's Churchyard, presents many old pointed-roof houses.

At 29, *Portland Square*, died, in 1850, Jane Porter, the author of the “*Scottish Chiefs*,” which romance, Sir Walter Scott confessed to George IV., was the parent in his mind of the *Waverley Novels*.†

* Broadmead Records, 76.

† *Gentleman's Magazine*, 1850, ii., p. 221.



BRISTOL AND ITS ENVIRONS.

SECTION III.

“Modern Bristol.”



OUR Sketch begins with the first decade of the present century. Bristol, at that date, was filled with framed houses, whose quaint arabesque'd gables darkened the daylight as it struggled through the oriel windows, which, borne on grotesque caryates, overhung the narrow thoroughfares. Lofty curb roofs, with picturesque dormer windows, leaded flats gay with flowers, and protected by embattled parapets, grim projecting gargoyles, turretted towers, and lofty spires, gave a mediæval character to the streets within the ancient walls.

The great bend of a tidal river swept around and through the centre of the city. Twice in the course of each day did its waters flow and ebb, bearing craft from every clime flush with the quays, and anon leaving them supine in the deep muddy ravine of the Avon. As a

natural consequence ships were "*hogged*," and freights ran high. To remedy these evils, in 1804 a new course was cut for the river, which, beginning at the incurvate bend at Totterdown, reached to the recurvature at Redclift House, in Rownham Meadows, a distance of two miles. The bend in the Avon thus severed by dams and locks, being about two and a half miles in length, and having an area of over 82 acres, and an average depth of 18 feet, was formed into a Floating Harbour, the waste of which was fed by a canal, that ran up into the Avon above a tide dam, near the Netham Chemical Works. This stupendous work, which was finished in 1809, and cost above £600,000, was effected by a Company, thenceforward known as the Bristol Dock Company.

But, though Bristol became possessed of one of the finest and safest harbours in the world, a mistaken policy on the part of the Dock Company, who persisted in maintaining a high rate of port charges, drove the trade away to other and cheaper ports; so that it was not until the year 1848, when the Docks were transferred to, and became the sole property of, the citizens, and Bristol was converted into a Free Port, that the modern city began to develop its capabilities for commerce. Meanwhile, forty invaluable years had been lost, immense industries had grown up and become consolidated around other ports to which the trade had been driven, and it will take centuries to recover to Bristol the advantages she lost by a neglect of opportunity.

The unequalled geographical position of the port, on the extreme west of England, opening as it does (through that safest of sheltered roadsteads, Kingroad)

right out into the Atlantic, its freedom from the perils of approach through narrow seas like the St. George's and English Channels, the vastness and quality of the coalfields by which it is surrounded, and the directness of its communication by rail, river, and canal with the Midland manufactories and with London, are advantages that must eventually tell, notwithstanding the lateness of its start. Bristol is destined to have her full share in the Ocean steam traffic of the world.

Since 1848 the tide of Fortune has ceased to ebb, and the outgrowth of the city, during the last ten years especially, testifies to its increasing prosperity.

The verdant hills and emerald meadows, where our children sought health in pastime, have become radiated with streets. West Clifton, Rockleaze, Redland, Cotham, Bishopston, Easton, Hanham, St. George's, Newtown, Totterdown, Knowle, are suburbs for the greater part the growth of this last decade, most of them being already densely populated. In the old city, grievous as it may be to the Antiquary, sentiment has had to give place to utility. Time-honoured gables, and mediæval thoroughfares, have been ruthlessly cut through by direct lines of broad streets, in which palatial granaries, banks, warehouses, offices, and manufactories tower proudly over railway, river, and road.

The railway accommodation is excellent. Two arterial lines, the Midland and the Great Western, converge in Bristol, and their traffic is continued to the West by the Bristol and Exeter Railway Company. The Bristol and South Wales Union, the North Somerset line to Radstock, the line to Weymouth, and that, *via* Devizes, to London, are affiliated to the Great Western, and run from Temple Mead. Thither also runs the

Thornbury line, *via* Yate; the Port and Pier Railway has an independent station at the Hotwells; and there is a branch of the Midland which, starting from the Batch, winds, *via* Bitton, to Bath.

The Cheddar Valley, Clevedon, Weston-super-Mare, and Portishead lines, are all worked by the Bristol and Exeter Company.

The Clifton Extension Railway is a short loop that connects Clifton with the termini of the other lines at the New Joint Station in Temple Mead. The Harbour Railway, which skirts a portion of the southern quaysage, completes the lines of rail. The London and South Western, the London and North Western, and the Somerset and Dorset Railways have offices in the city.

Passenger steamers run regularly to America (New York), Antwerp, Belfast, Bordeaux, Cardiff, Cork, Dublin, Glasgow, Hamburg, Ilfracombe, Liverpool, Lynmouth, Milford Haven, Neath, Newport, Padstow, Pembroke Dock, Port Talbot, Rotterdam, Swansea, Tenby, Waterford, and Wexford.

In addition to the above, steamers and traders run with goods to the ports of the West of England and Wales, Cadiz, Charente, Guernsey, Greece, Havre, Jersey, Oporto, &c. Canal boats ply daily to Bath, and thence through Wilts and Berks; trows sail daily, with the tide, up the Severn, for Gloucester, Worcestershire, Herefordshire, and so on through North Wales; whilst 113 vans, omnibuses, or coaches keep up communication, for the most part daily, with the populous villages of the surrounding district.

The internal omnibus and fly accommodation is good. All the principal trains are met, every 20 minutes there

is communication between the city and Clifton, the suburban omnibuses run every hour, and, ere these pages see the light, tram cars will, it is hoped, traverse the main arteries of traffic. Wherries ply on the Floating Harbour, at a charge of 6d. for one person; if more than one be carried the charge from place to place is 3d. each.

Bristol took an early, and a prominent, place in the Volunteer movement. She has always hitherto had some crack shots in for the "Blue Riband" of the Rifle. The corps are the 1st Gloucester Rifle Volunteer Corps, established 1858; the 1st Gloucester Artillery Corps, established 1859, eight batteries; and subsequently the 2nd Gloucester Engineer Corps, originally consisting of four batteries, was established.

The Naval Reserve has a training ship in the Harbour, and a gunboat for exercise at sea.

The greatness of a city should be measured by its beneficence rather than by its wealth. It is only when wealth is actively used, under the guidance of moral excellence, that it makes its possessor truly great. To repress crime, yet reclaim the offender; to develop sanitary and educational measures; to heal the sick, and assuage the calamities peculiarly incidental to labour and poverty; to aid the distressed, the afflicted, the orphan; to train the helpless into self-reliance and habits of industry; to dissipate the darkness of ignorance, and throw sunlight into the seculence and vice of the overcrowded courts and lanes of a teeming population, is philanthropy of the highest order. "By their fruits ye shall know them," is an adage as applicable to cities as it is to individuals. Measured by this standard, Bristol, whose Customs dues have hitherto

only been surpassed by London and Liverpool, and which contributes to the Inland Revenue of the country upwards of £600,000 per annum, will bear comparison with any city in the empire in proportion to its population, as the following list will show :—

Ashley Down Orphan Houses, for 2050 children	-	5
Board Schools	- - - -	19
Schools under inspection	- - - -	113
Industrial, Ragged, and Reformatory Schools	-	21
Training Ship	- - - -	1
Tender to ditto	- - - -	1
Endowed Schools	- - - -	12
Collegiate Schools, &c.	- - - -	6
Almshouses, in which the inmates receive from 2s. to 10s. per week	- - - -	23
Gifts to the Needy, varying from a few shillings to £21 per annum, chiefly to those who have never received parochial aid, distributed by the Charity Trustees	- - - -	21
Loan Money, in sums of £30 to £50, to young tradesmen, free of interest, for 2 or 6 years, or in sums up to £200 at 1 per cent.	- -	2
Societies for Benevolent Purposes	- - -	50
Asylums	- - - -	3
Religious Societies dependent on voluntary subscriptions	- - - -	38
Hospitals, Dispensaries, &c.	- - -	21

In the Orphan Houses, on Ashley Down, Bristol possesses the most notable and magnificent charity in the world.

The buildings, five in number, are similar in plan, solid, well-built, destitute of ornament, roomy, lofty, light, well-drained, and efficiently ventilated. They have accommodation for 2050 children and 120 officials, the average number of inmates being 2115 persons.

The land and houses have cost £115,000. The annual expense of clothing and maintenance for each orphan is now £13. This is exclusive of salaries. There is no capitation grant, grant in aid, or part payment. The sole conditions of admittance are these, that the child be a legitimate orphan, and legally destitute. Nearly £600,000 have been received in the form of voluntary contributions for the institution and its cognate agencies, since the work was begun, in 1836, by Mr. Müller. Not a debt has been contracted to the amount of one penny, no personal application for aid has been made by any connected with the work, their trust is in God, and their only invested fund a living faith in Him who says "Feed my Lambs," who has His stewards in every land, and to whom belong the treasures of earth and sea. That faith has been at times severely tried; the inmates have risen in the morning, penniless, and without food for the day; but the little ones have never hungered, the Father of the Fatherless has sent them "day by day their daily bread," and always in time. The visiting day for the House No. 1 is Wednesday, hours, 2.30, 3, and 3.30 p.m. This house contains boys, girls, and infants, the store rooms, bakery, &c. No. 2, containing girls only, is open on Tuesdays; No. 3, on Thursdays; and Nos. 4 and 5, on Fridays and Saturdays, at the same hours. It is useless to seek admission at any other times than those specified.

The Bristol and Clifton Society for Establishing Ragged Schools has eight effective schools in the city.

Amongst other Societies that are emulating them in this labour of love, we specially mention that of the Bristol Ragged School, on St. James's Back. The morning and evening therein are devoted to education;

the afternoon, from 2 to 4, is spent in industrial tuition.

In Park Row there is a Certified Industrial School for boys who have been sentenced under the Industrial Schools Act. The number of the inmates is about 70. This school can boast of the highest average as yet shown by any Certified School—90·49 per cent. of those who have been sent forth since its existence are known to be doing well.

In Clifton Wood, overlooking the Harbour, stands the Clifton Certified Industrial School, established 1849.

At Kingswood there is an Agricultural and Brick-making Reformatory School, founded 1852.

The old Red Lodge, in Park Row, is devoted to a Female Reformatory, under the control of that admirable philanthropist, Miss Mary Carpenter.

The inmates, who have all been sentenced under the Act, average about 70. In addition to the daily religious, moral, and intellectual instruction that they receive, they are carefully trained for domestic service, being taught housework, washing, sewing, cooking, &c.

This institution was the first in the kingdom certified for the reception of convicted girls. It was founded by Lady Byron, the widow of the poet. Visitors are welcomed on Thursdays from 2 to 4.

The above excellent institutions are all supported by voluntary contributions, combined with the usual Government allowance for those sent under the Act.

The Bristol Training Ship "Formidable," with its tender, the "Polly," is for Homeless and Destitute Boys. This ship is certified, under the Industrial Schools Act, for the reception, maintenance, and education of such of the above class as have not been convicted of felony.

Boys may be received, without a Magistrate's order, on a guarantee for a weekly sum, equivalent to the State allowance, of 6s. No boy who has been sent to prison can be admitted.

A capital Home for Friendless Boys has recently been opened in St. James's Back.

At Brislington, about two miles from Bristol, the Sisters of the Roman Catholic Convent of the Good Shepherd manage the Arno's Vale Reformatory. The inmates are all girls, 300 in number. The Sisters have also a Penitentiary of 30 inmates.

In Park Row there is an "Asylum for Hopeful Discharged Female Prisoners" (1853). In St. Matthew's Road is a "Girls' Certified Industrial School," averaging 36 inmates, supported by voluntary subscriptions, aided by a capitation grant for girls sent in under the Act.

The "Magdalen House" (1800), in Maudlin Street, and the "Refuge Society House," Marlborough Hill, are kindred institutions, working for the reclamation of unfortunate fallen females. The inmates are taught washing, needlework, &c., &c., and when deemed fit are restored to their friends, or are placed out in situations.

The "St. John's House of Mercy," Bedminster, has the same end in view, which in this case is reached through the medium of High Church principles.

There is also a temporary home for fallen women in Southwell Street, Kingsdown. A Preventive Mission Home, to secure young girls from the influence of vicious associates, and to fit them for domestic service, has its head quarters in the Royal Fort. There is another asylum for poor orphan girls, at Hook's Mills,

Ashley Hill. Destitute girls of good character are saved from the perils of low lodging houses, and are instructed and trained for service, and provided with situations, at the Guardian House, Upper Maudlin Street, and at the Girls' Industrial Home, Dowry Parade.

Young women of good character, not absolutely destitute, have a comfortable home provided for them on Montague Hill.

The Domestic Servants' Institution, in Dover Place, Clifton, furnishes at moderate charges lodgings for female servants of good character, who must bring with them a satisfactory reference.

The Bristol Young Women's and the Young Workwomen's Christian Associations have both of them flourishing Homes in King Square, and the Home for Ladies of limited means is at 25, Richmond Terrace, Clifton.

There is also a Home for Apprentice Boys at Grenville Place. The Reynolds' Commemoration Society does admirable work amongst the necessitous poor.

The Gloucestershire Society, established 1657, relieves indigent women at the time of childbirth, and apprentices boys natives of the county. The Clergy Society, established 1692, apprentices the sons of needy clergymen, and assists those whose income is not more than £30 per annum. The Caledonian and the Cambrian Societies relieve deserving but unfortunate Scotchmen and Welshmen.

The Friend in Need seeks out and aids the distressed in their own dwellings.

The Diocesan Visiting Society, under the guidance of the clergy, ministers parochially to the poor.

The Clifton Provident District Society has an active committee of 16 ladies and 19 gentlemen, employed in cases of need.

Mrs. Joan Langton's Charity is confined to the widows of freemen, who are relieved to the extent of two pounds.

The Bristol Benevolent and the National Benevolent provide as far as possible for the permanent relief of the distressed, without regard to age, sex, rank in life, country, or persuasion.

The Strangers' Friend Society cares for the sick and distressed strangers. The Samaritan Society hunts out and thoroughly investigates cases of wretchedness for which no other provision has been made.

The Bristol Provident and Clothing Society aids persons of scanty means, and by adding to their weekly payments helps them to clothe their families.

The name of the Clifton Loan Blanket Society shews at a glance its sphere of practical usefulness.

The Clifton Friendly Society was formed to aid those that aid themselves ; and the Charity Organization (or Mendicity Society), while it helps the helpless, unveils the roguery of the professed mendicant. The office of the latter is at 10, Culver Street.

In addition to the above, the Colston Commemoration Societies, the Anchor, Dolphin, and Grateful (Liberal, Conservative, and Neutral) raise between them something like £2600 on each anniversary of the birth of Edward Colston. This amount is expended in apprenticing boys, and the relief of proven cases of distress. The Colston Fraternal Association, established 1853, assists those who were once Colston Boys.

There is an admirable institution for the Deaf and Dumb at Tyndall's Park Gate, established 1841.

An Asylum or School of Industry for the Blind, with its church, crowns the top of Park Street hill. The work of the inmates is much sought after on account of its neatness, and their musical assemblies on Monday afternoons are well patronised. Established 1793.

To the above we must add the disbursements of the Bristol Charity Trustees, which for charitable and educational purposes exceed £26,000 per annum.

The sailors who visit the port are not neglected.

A Sailors' Home, under good management, protects those who enter from vicious associates, and gives them the comforts of a home. The Seamen's Friend and Bethel Union has a Floating Chapel that will hold a thousand people. There are a Seamen's Institute and Free Reading-room in Queen's Square; a Mission to Sailors, a Boatmen and Seamen's Mission, a Seamen's Mission Hall, a Bristol Auxiliary of the Shipwrecked Fishermen and Mariners' Royal Benevolent Society, and a Bristol Humane Society, which has 26 stations, for the recovery of persons apparently drowned.

The Bristol Hospitals take high rank among the eleemosynary corporations of the kingdom. The oldest is the Bristol Royal Infirmary, Marlborough Street, founded in 1735. The wards are spacious and well ventilated, and contain 244 beds. The average of patients is about 26,000, the casualties are somewhere about 4000, and the operations are nearly 100 per annum. Patients are admitted by subscriber's note, but casualties and cases of emergency find an open door at any hour.

The Bristol General Hospital, Bathurst Basin, established 1832, averages about 15,000 patients per annum. It contains every convenience that modern science has devised for the comfort of the sick and the assistance of the staff.

The Bristol Hospital for Sick Children, and for the outdoor treatment of women, is in the Royal Fort. It is of comparatively recent date (1866). Poor sick children are admitted gratuitously as in-patients at the discretion of the medical officer; women pay one shilling and sixpence entrance fee, and threepence on each subsequent attendance; children being out-patients pay sixpence entrance, and three halfpence for each succeeding visit.

The Small Pox and Fever Hospitals is in St. Philip's Marsh.

The Bristol Eye Hospital, Lower Maudlin Street, averages over 1000 patients per annum. There is also a Dispensary for Diseases of the Eye in Orchard Street, which has a similar average. The Hospital for Diseases of the Teeth is in Unity Street. The Clifton Dispensary, Dowry Square, Hotwells, provides attendance on the sick poor at their own homes, and includes cases of midwifery. The staff consists of five physicians, three surgeons, one resident medical officer, and three midwives.

The Bristol Dispensary in Castle Green ministers medically to the indigent sick in their own dwellings, and to lying-in women. Here also there is a numerous and talented staff—three hon. surgeon accoucheurs, five resident medical officers, a dispenser, and three midwives. Established 1775.

There is a self-supporting Dispensary for Deaf

persons in Lower Berkeley Place, Clifton, and a general Dispensary for Children in Redland.

The Female Misericordia Society, founded in 1800 ; three Dorcas Societies for widely separated portions of the city ; a Lying-in Institution for casual poor and cases of urgency ; a Nurses' Training Institution and Home ; sundry Infant Day Nurseries or "Creches," &c., give proof that the women and children are well cared for.

The number of children on the rolls of efficient schools in Bristol is 25,896, the average attendance is about 19,000, or seven-tenths ; there are also, it is computed, 3400 in dames' schools. The Board Schools are ten in number ; nine others are in progress. The schools under inspection are 113. It is gratifying to note an increase of one-sixth in the attendance of the children over the corresponding portion of last year. The offices of the School Board are in Small Street ; the number of its members is fifteen. There is another and smaller Board for the out-parish of Bedminster and its suburbs. The Private Day and Boarding Schools are generally efficient—indeed, some of them are of the very highest character.

The Endowed Schools of Bristol deserve the warmest praise. At the head of these must be placed the Bristol Grammar School, founded about 1531 by Robert Thorn. This school has two ~~fellowships~~ of £30 each at St. John's College, Oxford, and also several exhibitions, and in its educational results may challenge comparison with any school in the Empire. It stands on the site of the ancient Hospital of the Gaunts, is under the management of the Charity Trustees, and can boast of a thoroughly efficient staff of masters, twelve in number.

Queen Elizabeth's Hospital, or the City School, a noble building in the Tudor style, standing in four acres of land on the north west slope of Brandon Hill, is managed by the Charity Trustees. 200 boys are herein maintained, clothed, and educated.

The Red Maids' School in Denmark Street, near the Drawbridge, is also under the Trustees. Here 120 girls are maintained, clothed, and instructed.

The net income of the above three schools, at present about £8,200, will, under the Endowed School Act, be considerably increased.

In a new building, in the Italian style, in Victoria Street, Temple, 40 boys are clothed and educated under an endowment of Edward Colston, a great philanthropist of the last century.

The Hospital School which he founded was removed from the original site (Colston Hall) to the Bishop's Palace, at Stapleton, in 1861, where in a healthy rural spot 120 boys are clothed, fed, educated, and afterwards apprenticed.

The Bristol College School is in Lower College Green. It was founded by King Henry VIII. for educating six chorister boys; the number has since been increased to twelve.

Ellbridge, the founder of the Royal Infirmary, endowed a school for 24 girls on St. Michael's Hill.

In Pile Street there is a school for clothing and educating 40 boys. There is another in Temple Street for 40 girls, who are both clothed and educated. There is also an endowed school on Redcliff Hill for teaching 24 girls to read and to sew.

The Unitarians have an endowed school in Stoke's Croft, where 40 boys are taught. And at the

Merchants' Hall School, in King Street, lads are instructed in nautical astronomy and navigation, and young men are qualified for receiving their certificates as masters or mates gratuitously.

COLLEGIATE SCHOOLS, &C.

The Baptists have a college for educating young men for the ministry, devised in 1679. The name of Robert Hall, that prince of preachers, will ever shed a glory on its annals. This institution contains in its valuable library the only copy extant of Tyndale's 1st edition of the New Testament, and some other rarities.

The Gloucestershire Institution for the Training of Home Missionaries in connection with the Congregationalist body is a promising modern institution in Cheltenham Road.

The Bristol Medical School is in the Old Park. It is connected with the London University.

The Bristol Trades and Mining School, with an unpretentious exterior in Nelson Street, affords admirable tuition in the sciences as applied to engineering, mining, manufactures, &c., &c.

The Bristol School of Art flourishes in the handsome building known as the Fine Arts Academy in White-ladies' Road. The building, erected 1857, has an effective front in the Venetian style.

The Clifton College, on the verge of Clifton Down, with its beautiful Guthrie Chapel, school buildings, and grounds, though only founded in 1862, has already forced its way into the front rank as an "Alma Mater," under the admirable management of Dr. Percival, a friend and pupil of the late lamented Arnold. It possesses a good library and museum, schoolrooms,

large and well ventilated class-rooms, physical science schools, laboratories, baths, gymnasiums, sanatorium, cricket ground, &c., covering 15 acres. The buildings are handsome and beautifully situate.

Though not collegiate, there is a society the object of which is to educate suitable young men who are desirous of entering the ministry as clergymen. It was established in 1795 under the title of "The Bristol Clerical Education Society."

The Young Men's Christian Association and Literary Institute in St. James's Square, is most efficiently conducted. It was established in 1853.

The Band of Hope Union (1862), the Temperance Society (1836), the Western Temperance League, the United Kingdom Alliance, and a multitude of Good Templar Lodges flourish, and do good work amongst the masses. The Bristol City Mission, the United Bristol Mission, the Bristol Domestic Mission, and the Bristol Scripture Readers' Association, in friendly rivalry] seek the spiritual welfare of the neglected poor.

The Bristol Itinerant Society, established 1811, sends some 56 laymen gratuitously as preachers into the country towns and villages within a radius of 13 miles of the city. The Baptist Itinerant Society and the Brethren have between them, perhaps, a like number of agents.

There are auxiliaries in Bristol of the Bible, Tract, Society for the Propagation of the Gospel, London, Church, Baptist, Jewish, Turkish, Moravian, and Wesleyan Missions. The Scriptural Knowledge Association looks after schools, tract, Bible, and mission work; it supports 60 day, 20 Sunday, and 7 adult

schools. The Bristol Chapel Case Association assists in erecting suitable buildings for worship in approved localities. The Bristol Sunday School Union, the Church of England Educational Society, the Church Pastoral Aid Society, the Lay Protestant Church Association, the Gloucester and Bristol Diocesan Association, are but samples of the many excellent societies, that our limited space forbids us even to quote by name.

The number of places of worship in Bristol is one hundred and thirty-nine. This does not include rooms for preaching. Bristol has been known for centuries as the "City of Churches." Within its present limits, as early as the 13th century, it contained 22 churches, to which another was added in the 14th. (Of these venerable edifices (several of them of Saxon origin) there yet remain eighteen, viz. :—

- The CATHEDRAL, Holy Trinity.
- ALL SAINTS', Corn Street.
- 1577 ST. AUGUSTINE THE LESS.
- ST. ANDREW, Clifton.
- ST. JAMES, Haymarket.
- ST. JOHN'S, Bedminster. —
- ST. JOHN BAPTIST, Broad Street.
- ST. MARK'S, College Green.
- 155 ST. MARY-LE-PORT, Mary-le-port Street.
- 155 ST. MARY REDCLIFF, Redcliff Hill.
- ST. MICHAEL, St. Michael's Hill.
- ST. NICHOLAS, Nicholas Street.
- ST. PETER, Peter Street.
- 5 ST. PHILIP AND JACOB, Church Lane.
- ST. STEPHEN'S, Stephen's Avenue, Clare Street.
- TEMPLE, Temple Street.
- ST. THOMAS, Thomas Street.
- 155 ST. WERBURGH'S, ~~Corn Street.~~ rem.

As these have already been noticed in the Historical portion of this work, we pass them with a brief comment.

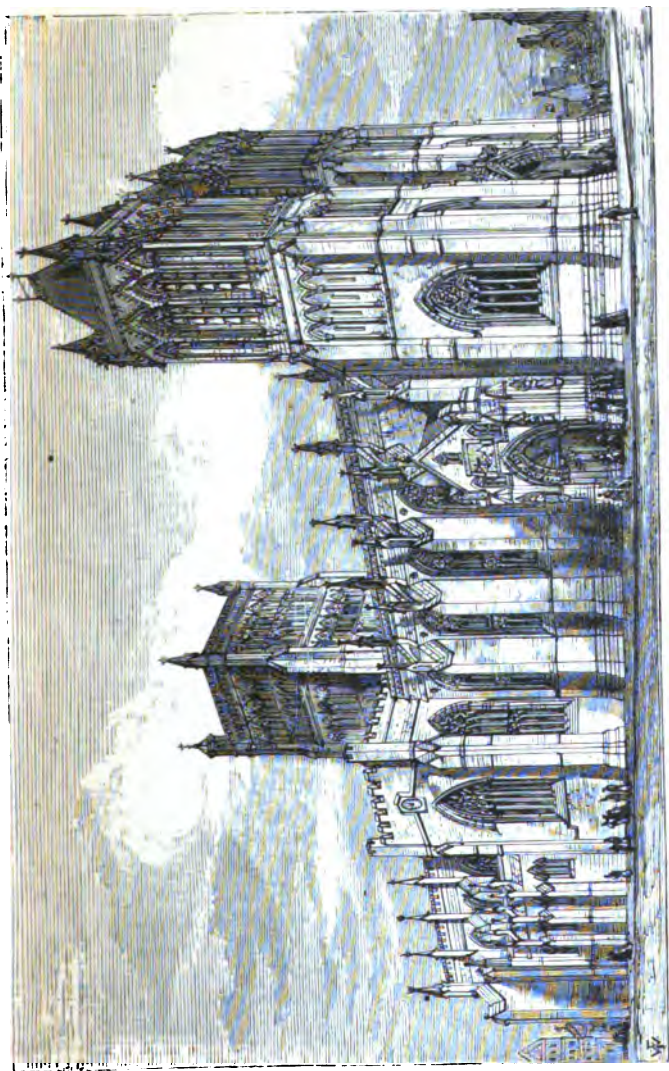
The Cathedral, which has been without a nave since the end of the 15th century, is undergoing restoration; a new nave and two western towers are being built, and the whole building is gradually growing more worthy of its position as a diocesan church. St. Mary Redcliff, "the Pride of the Western land," has been during the last 33 years carefully restored, and its graceful spire now forms one of the most prominent objects of the city. The interior of St. Mark's is a perfect bijou of ecclesiastical architecture. St. John's Gateway, under the tower of the church of that name, is a relic of the old city wall, and the graceful tower of St. Stephen's, with its light angular pierced battlements and turrets, is one of the finest specimens in the West. X

X St. Werburgh's Church is destined to come down for street improvements, but no Vandal hand should be allowed to touch its admirable tower.

Several of the above churches were reconstructed, but no new church appears to have been erected in Bristol until the middle of the 18th century, when Redland Green Episcopal Chapel (one of the purest bits of Grecian architecture in the West) was built and endowed at the expense of Mr. Cousins, in 1750. St. Andrew the Less, in Dowry Square, followed in 1751—rebuilt and consecrated 24th September, 1873—and in 1794 that architectural abortion St. Paul's, Portland Square, reared its incongruous bulk.

Since 1822, in addition to many restorations (some of which have been equivalent to the re-building of the structure), thirty-five churches have been built within

continued X
- Ashley Hill



BRISTOL CATHEDRAL AS RESTORED.



the boundary. These, as far as our space will allow, we shall remark upon in our perambulations of the city.

ST. GEORGE, Great George Street, Park Street, 1823.

ORPHAN ASYLUM CHURCH, Hook's Mills, 1827.

TRINITY CHURCH, St. Philip's, 1830.

ST. PAUL'S, Bedminster, 1831.

BLIND ASYLUM CHURCH, 1832.

ST. PETER'S, Clifton Wood, 1835.

ST. MATTHEW'S, Kingsdown, 1835.

ST. JOHN THE EVANGELIST, King's Parade, Durdham Down, 1841.

CHRISTCHURCH, Clifton Down, 1841.

ST. BARNABAS, Ashley Road, 1843.

ST. LUKE'S, Barton Hill, 1843.

ST. ANDREW'S, Montpelier, 1845.

ST. SIMON, Baptist Mills, 1847.

ST. MARK'S, Lower Easton, 1848.

ST. JUDE'S, Poyntz Pool, 1848.

ST. MATTHIAS, Weir, 1851.

ST. PAUL'S, Victoria Park, Clifton, 1853; this church was unfortunately burnt down to the ground in December, 1866, and was rebuilt and reopened in September, 1868.

ST. CLEMENT'S, Newfoundland Street, 1855.

ST. RAPHAEL, Cumberland Road, 1857.

ST. BARTHOLOMEW, Union Street, 1861.

ST. LUKE'S, Redcliff Crescent, Bedminster, 1861.

ST. MICHAEL AND ALL ANGELS, Bishopston, Horfield, 1862.

ST. EMMANUEL, St. Philip, 1862.

ST. JAMES'S CHAPEL OF EASE (Hensman's memorial Church), Clifton, 1862.

ST. MARY THE VIRGIN, Tyndall's Park, opened as an iron church in 1865; rebuilt in stone and consecrated, 1874.

ST. SILAS, St. Philip's Marsh, 1867; rebuilt, 1872.

ST. PAUL'S GUTHRIE MEMORIAL CHAPEL, Clifton College,
1867.

ST. JAMES THE LESS, Upper Maudlin Street, 1867.

ALL SAINTS' CHURCH, Pembroke Road, 1868.

EMMANUEL DISTRICT CHURCH, College Road, Clifton,
1869.

ST. GABRIEL'S, Upper Easton, 1870.

HOLY NATIVITY, Knowle, 1871.

ST. NATHANIEL, 1875.

The Dissenting element in Bristol is very strong, as shewn by the number of their places of worship (86), some of which are architecturally beautiful. Eighty-four of these have either been built or re-constructed during the present century.

The BAPTISTS have eleven Chapels.

BROADMEAD CHAPEL, originally a Congregational Union Church, founded in 1643, and will seat 1000 persons.

BUCKINGHAM CHAPEL, in Buckingham Place, Clifton, will seat 600.

CITY ROAD CHAPEL. The Church worshipping here was formed in the Old Pithay Chapel, somewhere about 1630, and is the oldest Baptist cause in the city. It will seat 850.

COTHAM GROVE CHAPEL was opened in 1872. It will seat 560.

COUNTERSLIP CHAPEL, dating from 1804, will seat 1250.

OLD KING STREET CHAPEL was built in 1817. It will seat 1100.

PHILIP STREET CHAPEL is in Philip Street, Bedminster.

PROVIDENCE CHAPEL is in Grosvenor Road, St Paul's.

THRISSEL STREET CHAPEL is in the street of that name, Easton Road.

There is a WELSH BAPTIST CHAPEL in Upper Maudlin Street.

TYNDALL'S CHAPEL, White Ladies' Road, was opened in 1867.

The BIBLE CHRISTIANS have Chapels in Gladstone Street, Stapleton Road, and Prince's Street, Bedminster.

The CALVINISTIC WELSH METHODISTS boast that their Chapel

Broadmead is the first chapel that John Wesley built. The foundation stone was laid in 1739.

The CHRISTIAN BRETHREN, amongst whom George Müller labours, have five places of worship—Bethesda Chapel, Clifton; Bethesda, Great George Street; Salem Chapel, St. Augustine's Place; Unity Chapel, Midland Road, St. Philip's; and the Gospel Hall, Newfoundland Gardens.

The Congregationalists have 22 Chapels.

ANVIL STREET, which began in 1830 as a Ragged School. It will hold 800, and has model school accommodation.

ARLEY CHAPEL, at the junction of Arley Hill and the Cheltenham Road, will seat 600. Was opened 1855.

BARTON HILL CHAPEL, near the Great Western Cotton Works. Opened 1841.

BETHEL CHAPEL, Windmill Hill, founded 1855.

BRUNSWICK CHAPEL, Brunswick Square, opened in 1835, seats 1100.

CASTLE GREEN CHAPEL is without doubt the oldest Dissenting Church in Bristol. Before Mr. Yeamans died, which was in 1633, the Separatists used to meet at Richard Langford's house, a house carpenter, in the Castle. In 1654 we learn that they met in the Governor's (Col. Scroope's) house in the Castle. The chapel, erected in the beginning of the following century, was replaced by the present building 1815.

CLIFTON DOWN CONGREGATIONAL CHURCH, on Clifton Park Down, will seat 800. A license granted by Charles II. to Mr. Jno. Weeks, to preach in a room in St. James's Back, carries this church back to 1672. Its meeting house being destroyed by a mob in 1682, the church settled in the Old Theatre, Tucker Street. This, when Bath Street was made, was pulled down, and a new chapel was built in 1786 in Bridge Street.

GIDEON CHAPEL is in Newfoundland Street. It will seat 800.

HIGHBURY CONGREGATIONAL CHURCH will accommodate 700 persons.

HOPE CHAPEL, Granby Hill, Clifton, was opened in 1786. 400 out of the 1000 sittings are free.

KINGSLAND CHAPEL, in the Dings, will seat 600.

LODGE STREET CHAPEL, dates from August, 1775, but the

present building, at the back of Colston Hall, was opened in 1831. It will seat 900. All seats free.

There is a small WELSH CHAPEL in Lower Castle Street, opened in 1823. 300 sittings, all free.

A MISSION CHAPEL in Salmon Street, Kingsdown, 1859.

Another in Moorfields, St. George's.

PEMBROKE CHAPEL, an iron structure, in Oakfield Road, Clifton, about to be replaced by a handsome stone building.

REDLAND PARK CONGREGATIONAL CHURCH was opened in 1866.

RUSSELL TOWN CONGREGATIONAL CHURCH, Lawrence Hill. Opened in 1868.

SERGEANT STREET CHAPEL is in Bedminster.

STAPLETON ROAD CHAPEL, having 1000 sittings, all free, was opened in 1871.

The memorial stone of the OLD TABERNACLE, in Penn Street, was laid by George Whitfield, who also opened the Chapel in 1753. The first Sunday School in Bristol was begun in the Tabernacle. It will seat 960; 400 of the seats are free. It is now conjoined with Stapleton Road Chapel.

WYCLIFF CHAPEL, Guinea Street, erected by the Wesleyans, became Congregational in 1848.

ZION CHAPEL, Bedminster Bridge, was erected at the sole expense of Mr. Jno. Hare (the founder of the famous floorcloth manufactory). It was opened in 1830 by Dr. Chalmers. It has 900 sittings, 250 free.

The principles of the Friends were first introduced to Bristol by Dennis Hollister, in 1653. The congregation occupied rooms adjoining Broadmead Chapel previous to 1671. Their present meeting house is on the site of the Old Dominican Friary, Rosemary Street. It was built in 1678.

The Jews have a neat SYNAGOGUE in Park Row, in the Moresque style. Consecrated in 1871.

The IRVINGITES, or Catholic Apostolic Church, have a small iron structure, Upper Berkeley Place, Clifton. It was opened in 1867, and its 140 sittings are all free.

The MORAVIAN CHURCH, in Upper Maudlin Street, was opened 1757. It has 450 free seats. Mrs. Schimmelpenninck was buried in its grave yard.

The New Connexion Methodists have HOPE CHAPEL in Castle Green. Opened 1855.

The Plymouth Brethren have a place in Orchard Street.

The Primitive Methodists have six Chapels.

BARTON HILL, Summer's Town, opened 1870.

BETHEL, Hanover Street, Callow Hill Street, opened 1866.

BETHESDA, Essex Street, Bedminster, opened 1871.

EBENEZER, Midland Road, St. Philip's, opened 1849.

LOWER EASTON, erected by the Wesleyans 1820, opened 1840.

WHITEHALL, St. George's, opened 1870.

The Roman Catholic places are five in number.

The CHURCH OF THE APOSTLES (unfinished), Park Place, Clifton.

The CHURCH OF THE HOLY CROSS, dedicated in Bedminster 1855, removed in 1874 to Victoria Street, near the Railway Station.

ST. JOSEPH'S CHAPEL, Trenchard Street, now used chiefly as a school room.

ST. MARY'S CHURCH, St. Augustine's Parade (Grecian), erected for the Irvingites in 1840; sold by them in 1843, in which year it was consecrated by Bishop Baines. In 1871 it was purchased by the Society of Jesus.

ST. NICHOLAS' CHAPEL, Pennywell Road. Opened in 1851, but not finished.

The Roman Catholics have also six Convents.

SEAMEN'S BETHEL, a Floating Chapel, moored at the Grove. This was a bomb ship, the "Etna." The work was commenced in 1821.

The Unitarian body have three Chapels.

LEWIN'S MEAD, which stands on the site of the Franciscan Monastery. The present capacious building was erected in 1789, on the site of one built in 1705.

A MISSION CHAPEL in Lower Montague Street.

OAKFIELD ROAD CHURCH, opened in 1864, has 400 sittings.

The United Methodist Free Church have twelve Chapels.

One at Baptist Mills, another at Clay Hill.

HEBRON CHAPEL, in Bedminster. Opened 1854. Will seat 800 people.

MILK STREET CHAPEL, opened 1854.

MOUNT OLIVE CHAPEL, Durdham Down, opened 1855.

PORTWALL LANE CHAPEL, 1859.

REDFIELD CHAPEL, St. George's, built in 1869 to replace a smaller one, still standing, erected in 1850.

RUSSELL TOWN CHAPEL, erected in place of a smaller one on Lawrence Hill; opened 1869.

Spring Place, Pyle Hill, St. George's Road, Tyler's Fields, and Newtown (Trinity), have also neat and commodious Chapels pertaining to this denomination.

The UNITED PRESBYTERIAN CHURCH OF SCOTLAND, in St. James's Churchyard. Will seat 700 persons.

The Wesleyan Methodist Chapels are twelve in number.

EBENEZER, Old King Street, built in 1795, will seat 1200 persons.

EBENEZER CHAPEL, Victoria Road, Bedminster, was erected in 1836. It has a capital school room.

GRENVILLE CHAPEL, Cumberland Basin, was built in pursuance of the will of Thomas Whipple, a member of the Church of England, and was by his trustees presented to the Conference in 1839. It will seat 750, 400 of the sittings being free.

LANGTON STREET CHAPEL was opened in 1828. It was a removal from the old Chapel in Guinea Street. It will accommodate 1200 people, and has 500 free seats.

OLD MARKET STREET CHAPEL will seat 1300 persons. It was opened in 1817.

PORTLAND STREET CHAPEL, Kingsdown, was built in 1792, chiefly by Lieutenant Webb, who usually preached in his regimentals. It will seat 800.

REDFIELD CHAPEL, St. George's, was opened 1815.

ROSE STREET CHAPEL is in Temple Parish.

TRINITY CHAPEL, White Ladies' Road, was erected in 1866. The sittings are 850 in number.

TOTTERDOWN. Service has been conducted for three years in a school house; the Chapel, which forms part of the original plan, is now being erected in Bushy Park.

VICTORIA CHAPEL, White Ladies' Road, opened in 1863.

WESLEY CHAPEL, Baptist Mills, was built in 1837.

ALMSHOUSES.

The following are vested in, and are under the control of, 21 Trustees, known as the Trustees of the Bristol Municipal Charities, and appointed by the Lord Chancellor. The office is in Queen Square, No. 14.

Barstaple's Hospital (Trinity Hospital), top of Old Market Street. Founded by John Barstaple, merchant, A.D. 1402. Dedicated to the Trinity and St. George. Reconstructed 1867, and now being enlarged by 24 rooms. 8 men and 12 women, above 50 years of age, receive 6s. per week, with extras, and have each a sitting and a bed room. The chapel was rebuilt 1738. On the south side of the street is another building, in which 24 aged women find a home; each of these receives 6s. weekly, besides extras. This was founded by Isabella Barstaple, the wife of the above-named John. These charities are both treated as one, having a nett income of about £1600, Mr. Richard Reynolds having bequeathed £4000 to the inmates in A.D. 1809.

Foster's Almshouse, Colston Street, "Builled in honor of God, and ye three Kings of Coleyn," by John Foster, a Bristol merchant, A.D. 1483. The quaint little chapel was built in 1484. (The sedilia on the steps beneath have no connection with the ancient building.) Additional endowments to this Hospital were made in 1505 and 1553.

The house was rebuilt in 1702, enlarged in 1863, and partially rebuilt in 1873. Its income is about £800 per annum. 12 men and 12 women each receive 6s. weekly, one ton of coal per annum, and other allowances.

The following are not under the Charity Trustees:—

In Temple Street, on the spot where once stood the

Hospital of the Knights Templars, afterwards that of the Prior and Brethren of St. John of Jerusalem, stands a quaint parallelogram of small gabled buildings, with a narrow grass plot running up its centre, entered by a gate-house in the Perpendicular style, in which resides the ancient brother. This Hospital was founded by Thos. White, D.D., in 1613, to bear the name of "The Ancient Brother, Brothers, and Sisters of the Temple Hospital in Bristowe." Originally intended for 10 poor and impotent people, its property has so augmented that 32 occupants now have two rooms each, 7s. per week, and a number of other donations.

All Saints' Almshouse. Built in 1350, it is said, by Stephen Gnowsall, in All Saints' Lane; removed, when the Exchange rose partly on its site, in 1740, to St. John's Lane. City improvement again removed it to All Saints' Street in 1813. Eight aged women receive 5s. 3d. per week, besides sundry gifts.

Blanchard's Almshouse, in Milk Street, provides a home for "five poor old maids, whose labour is done; and, for want of such poor maids, for widows, of the Baptist persuasion." Each inmate receives 4s. per week. Founded by Miss F. Blanchard, 1722.

On an ancient building in Long Row is an inscription ascribing its foundation to be by Simon de Burton, 1292, who is said also to have been five times mayor of the city, and the founder of St. Mary Redcliff Church. The name appears in the list of mayors six times, but that Simon Burton founded this Almshouse is about as mythical as the statement that he founded the church. The honour belongs to John Burton, bailiff, sheriff, mayor, and afterwards M.P. for Bristol, between 1416 and 1450.

In Burton's Almshouse 16 poor women receive each, weekly, 5s., besides a few small gifts.

Clifton Almshouse, erected and endowed by the late T. W. Hill, Esq., for 12 old persons, stands in the vale between the Brandon and Clifton Hills.

Colston Almshouses and Chapel, on St. Michael's Hill. Founded by Edward Colston in 1691, for 12 men and 16 poor women; these each receive 7s. a week and coals. The elder brother has 10s. Prayers in the chapel twice a day.

Fry's House of Mercy, Colston Parade. Eight single women here receive 3s. each per week.

Merchant Tailors' Almshouse, Merchant Street. Founded by Charter of Richard II., 1399. The edifice was erected A.D. 1701. 6s. per week is paid to each inmate of the nine apartments, the same being tailors, or tailors' widows. A similar amount is distributed to out pensioners.

The Merchant Seamen's Almshouse, in Great King Street, is a quadrangle, founded 1696. 19 seamen and 12 seamen's widows receive, the elder brother, 10s., the rest 6s., weekly, besides donations.

Redcliff Hill Almshouses, of which Canynge is the "reputed" founder, give accommodation to 14 persons who receive 1s. 6d., and some of them 2s., per week.

The Redcliff Poorhouse for 11 persons; three of these have 2s. 3d., and nine 2s., each, per week.

Ridley's Almshouse, in Milk Street, founded by Miss Ridley, built 1739. Five bachelors and five maids inhabit here, each receiving 9s. every fortnight.

St. James's has a Poorhouse, wherein are 12 poor women, who each receive 4s. weekly.

Spencer's Almshouse, in Lewin's Mead, founded in

1493, was richly endowed with 2d. per week for each of its 12 inmates. 16 aged persons now receive each 2s. 6d. per week from St. Peter's Hospital.

St. John the Baptist's Almshouses are on St. John's Steep. These are said to have been founded by Robert Strange, thrice Mayor of Bristol. Founded about 1490. Rebuilt 1721. Seven aged women receive each 3s. 5d. per week, and sundry small donations.

St. Nicholas Almshouse, in Great King Street, a many gabled building, dated 1652, forms a home for 16 aged women, supported by gifts and a weekly sum from St. Peter's Hospital.

St. Raphael's Almshouse, in Cumberland Road. 6 aged seamen receive a small weekly allowance, and coals.

Alderman Stevens, in 1679, founded an almshouse for freemen's widows or daughters. It is situated in the Old Market. 16 persons have apartments herein, and they each receive, weekly, 5s.

Stevens's Temple Almshouse was founded by the same benevolent individual. Here there are 12 apartments, and each inmate receives, weekly, 5s.

The Unitarian Almshouse, in Stoke's Croft, was founded by Abraham Hook in 1722. Here 12 poor women each receive 12s. 11d. per month.

LOAN MONEYS.

Sir Thomas White, John Heydon, Robert Thorn, Robert Aldworth, George White, John Whitson, Robert Rogers, John Dunster, Thomas Jones, Robert Kitchen, Robert Redwood, Francis James, John Doughty, Thos. Pearce Allison, each left sums of money to be loaned. These moneys are all consolidated, and are lent in

sums not exceeding £500, or less than £50, to any merchant, trader, manufacturer, or mechanic residing and trading in Bristol, free burgesses having the preference, on the joint security of the borrower and two or more sureties. All sums under £100 to be free of interest; from £100 to £300 to pay 1 per cent. per annum; from £300 to £500 to pay 2 per cent. per annum.

Dr. Thomas White's Loan Fund is in sums of £30, within the enlarged boundaries of the city.

The Loans are obtained on petition.

Large sums, varying from 2s. to £30, are distributed yearly, under the control of the Charity Trustees and the Corporation, full particulars of which may be found in various local publications. A portion of these moneys, amounting to £17,500, has recently been diverted to educational purposes.

All the great religious societies are represented in, and well supported by, the city.

The Prisons are three in number:—Lawford's Gate is a County Prison, situated in Gloucester Road. The Bridewell, dating from 1507; rebuilt 1551, 1557, and 1832. The Gaol, on the New Cut, 1820, cost £60,000. Accommodation for 200. It contains a chapel, built by the prisoners, value £3500, and an organ, value £350, provided by the Governor, Mr. J. A. Gardner, who anticipated the Prison's Act of 1865 by some 30 years, and had all the yards reconstructed; but, the building being not in strict compliance with the Act, which requires each cell to measure 13 by 7, and to be 10 feet in height, both this gaol and the Bridewell are condemned, and a new gaol is now being built at Horfield, which will be opened in 1878.

The Courts of Quarter Session and Assize are now held in the Guildhall, which has a double frontage, looking eastward into Broad Street, and westward into Small Street. The Mayor of Bristol, by charter, has a seat with the Judges. The ancient "Pie Poudre" or "Dustyfoot Court," formerly held in the open air in Old Market Street, has been lately amalgamated with the Tolzey Court, which, having also, under a recent Act, come under the Common Law Procedure Act, is now held quarterly under the Recorder; Counsel only can plead. The Court of Request, the Court of Conscience, and the Court of Bankruptcy are all merged in the County Court, which is also held in the Guildhall. The Justices' Court of Petty Session is held daily at the Council House.

MARKETS AND FAIRS.

Cattle Market, Temple Mead, will accommodate 7000 sheep, 500 pigs, 300 horses, and 1000 oxen.

There are also markets for Corn, Fish, Hay and Straw, Leather, and Provisions.

The Fairs for live stock, wool, and leather are held March 1st and September 1st.

PUBLIC BATHS, WASHHOUSES, &c.

One on the Weir, opened 1850; the other, Mayor's Paddock, New Cut, opened 1873. They contain swimming baths, and every requisite for the laundry at a merely nominal rate.

The old Hotwell Baths have disappeared before the onward march of improvement. The hot spring remains free to the public.

Rennison's Swimming Baths, Montpelier.

The Turkish Baths, College Green, formerly the "Great Western Hotel," are fitted up for Turkish, electric, oxygen, and ozone baths, with every comfort for resident patients, who may breathe also at their pleasure "medicated atmospheres."

The Medical Baths, 9, College Green. Also at Malvern House, Redland.

Victoria Swimming Bath, Oakfield Place, Clifton.

Bristol is well supplied with water from springs under the Mendips at Chewton, East Harptree, Barrow, and Chelvey. Conveyed by stone aqueducts from Chewton, 15 miles from Bristol, to the storage reservoirs at Barrow, which are 66½ acres in extent, it is then carried by pipes, for six miles, into the city. There are five service and four compensation reservoirs at different points of the works.

The old conduits, given by the monks, still flow. All Hallows, in All Saints' Lane. The Huge Well on Redcliff Hill and in St. Thomas's Lane. The Quay pipe at the Tontine warehouses. The Boiling Well supplies Nelson Street. The flow of the old Temple conduit alone has been intercepted; its waters are stopped, and utilised by the engineering sheds of the Bristol and Exeter Railway.

There are twenty fountains in different parts of the city, and latterly a number of neat shelter houses for cabmen have been erected by philanthropic individuals.

In 1811 Mr. John Breillat, a dyer, lighted his premises with gas, from coal, of his own manufacture. He became the engineer of the first, or the old, Gas Company, incorporated 1819. The works of this Company, the second formed in England, are in Avon Street, St. Philip's. Another Company, the "Oil Gas Company,"

with works in Limekiln Lane, formed in 1823, amalgamated with the original company in July, 1853.

The banking facilities of Bristol are all that can be desired. The first bank out of London (excepting a sort of Exchange kept by a Jew at Derby) was established in Bristol, August 1st, 1750. Still in existence, this bears the appropriate name of the Old Bank.

The Branch Bank of England, in Broad Street. The London and South Western in High Street.

Miles and Co.; the National Provincial Bank of England; Stuckey's; the West of England and South Wales District Bank; and the Wilts and Dorset Banking Company, are all of them in Corn Street.

The Savings Bank, which is the oldest in the kingdom, is in St. Stephen's Avenue.

The Insurance Offices, like the Banks, are gregarious, the great majority of them being in Corn Street, or its vicinity.

The chief hotels are—For Clifton, the Queen's, the Clifton Down, and the St. Vincent's Rocks. In Bristol, the Grand Hotel, the Royal, and the Talbot.

The Libraries are three. The old City Library, in King Street, now being transformed into the Bristol Free Library (under the Act). This institution is the oldest Free Library in the kingdom, having been founded in 1613. It contains about 14,000 volumes, many of them valuable editions of the 15th and 16th centuries; some good MSS., especially a vellum Bible of the 13th century. The chimney piece is one of Grinling Gibbons's "*chefs d'œuvre*"—the airy lightness of the flowers and foliage, and the naturalness of the plumage of the birds, carved out of solid oak, are marvellous specimens of the artist's skill. This chimney piece is

valued at upwards of one thousand pounds. The others are the Bristol Library, a subscription library under the same roof as the Museum, which has an admirable selection of about 40,000 volumes; and the Law Library, in the Assize Courts, Small Street.

The newspapers of Bristol may safely challenge comparison with the Provincial Press of any city in the Empire, Manchester perhaps excepted. They number three daily and four weekly.

The Reading Rooms are those of the Athenæum, the Commercial Rooms, Bristol Library, and the Young Men's Christian Association; these are open only to subscribers. Strangers, on introduction, or by presenting an address card, are, however, in each case, courteously welcomed.

The Public Buildings and Offices are :—The Barracks, Horfield, 1845; accommodation for 350 infantry and 112 horses. The Council House, Corn Street. Custom House, Queen Square. Exchange, Corn Street. Guildhall, Broad Street. Police, Bridewell Street. Post and Telegraph Offices, Small Street. Registrars, All Saints' Court; for Clifton, Picton Street. School Board, Assize Courts.

The Poor Law Unions comprise that of Bedminster, the house being at Bourton; the Bristol Corporation of the Poor, their offices being in the ancient Mint, a fine old Elizabethan mansion, now known as St. Peter's Hospital, and the workhouse, once a French prison, at Stapleton; and the Clifton Union Workhouse, which is at Fishponds. The Lunatic Asylum adjoins the Stapleton Workhouse. The population of Bristol is computed now to exceed 200,000; at the last census, it was as under :—

City Parishes	-	-	-	-	-	61,695
Cotham and Redland	-	-	-	-	-	9,210
Bedminster	-	-	-	-	-	28,123
District	-	-	-	-	-	13,842
St. Philip's, Without	-	-	-	-	-	42,287
Clifton	-	-	-	-	-	26,315
						<hr/>
						181,472

The Municipal Government consists of a Mayor, 16 Aldermen, and 48 Town Councillors; there are a Recorder, 34 Magistrates, a Sheriff, Town Clerk, Treasurer, Coroner, Librarian, &c. The office of Lord High Steward, held since 1834 by the Dukes of Beaufort, is purely an honorary title. The arms of the city are, Gules, on a mount vert, issuant out of a castle silver, upon wave, a ship of gold. The crest—"Upon the helmet, in a wreath of gold and gules, issuant out of the clouds, two arms in saltire and charnew, in one hand a serpent vert, in the other a pair of balances gold." Supporters—"Two unicorns sejant, gold maned and horned; and clayed sables, mantled gules, double silver." Motto—"Virtute et Industria." Granted 1569.

The city has returned two Members to Parliament since Edward I., A.D. 1283; although its population has increased some twenty-eight, and the value of its property fifty, fold, it has only the same weight to-day in the Commons which it had six centuries ago.

The Cemeteries are the Bristol General, at Arno's Vale, which contains 27a. 3r. 30p. There are two chapels. The one side was consecrated in 1840. This is an enchantingly beautiful spot, is most carefully conserved, and admirably managed. Open daily till sunset. Close by it is the Roman Catholic Cemetery, and on the opposite side of the road the Cemetery of Red-

cliff Parish. There is also a small cemetery in John's Lane, Bedminster, which pertains to Bedminster Parish Church. The Greenbank Cemetery, Stapleton Road, belongs to St. Philip's Parish ; and the Unitarians have an ancient cemetery in Brunswick Square, but both this and that of the Friends, in Rosemary Street, are now rarely used.

The Bridges are:—Bath Bridge (or Hill's), over the New Cut near the Station. Bedminster (or Harford's), which connects Redcliff Hill with Bedminster. Froom Bridge, Bridewell, St. John's, and Elle Bridge are now culverts for the Froom. Wade's Bridge, or Traitor's (so named from its builder, Nathaniel Wade, who was out with Monmouth). Bristol Bridge, the ligature between the ancient city and Redcliff. Clifton Suspension Bridge. St. Augustine's, or the Drawbridge. Prince Street Bridge, and St. Philip's.

The Rivers are the Avon, which is tidal to Netham ; and the Froom, which drains the valley between the Cotswolds and the Severn ; the latter has a rapid fall of 70 feet in four miles, and hence the lower lands are very subject to floods. The little river Trym falls into the Avon at Sea Mills.

Cab Fares. By time, sixpence each quarter of an hour, speed five miles an hour. By distance, one shilling for the first mile and a half, and fourpence for every additional half mile. Extra fare for the hills.

COMMERCE AND MANUFACTURES.

Commerce brought into the public walk
The busy merchant ; the big warehouse built,
Raised the strong crane, choked up the loaded street
With foreign plenty ; and on either hand,
Like a long wintry forest, groves of masts
Shot up their spires, the bellying street between.

There are no more useful members of a community than our manufacturers and merchants. They are the cement that binds peoples together, distributing earth's varied productions, irrespective of climate or distance, furnishing work for the poor, luxuries for the wealthy, and splendour for the great.

Without extending the nation's boundaries they have given to Britain another empire, added largely to the value of real estate, and built up thereon other property more valuable a hundredfold than the land itself.

De Foe was right when he said "An estate was a pool, but a trade was a spring ; once troubled, the one seldom got clear, but the merchant's estate was continually flowing." He adds, moreover, this, "A true bred merchant is the best gentleman in the nation, in knowledge, in manners, in the judgment of things." That may or may not be so ; but this is certain, that commerce tones down the prejudices, heals the animosity that often exists between nations ; softens and polishes men's manners by frequency of contact ; calls into play, by the law of self-interest, all the business talent that it can muster ; and is ever disposed to maintain peace and tranquillity at home and abroad. When Napoleon called us a nation of shopkeepers, the sting, if any, lay in the name only. England's true pride should be that she manufactures for and supplies

the whole world. Bristol, too far westward of the great hives of industry to be a large place of export, has yet a few notable industries, whose productions are well-known, and their reputation cosmopolitan. These we shall shortly specify, naming those only with which we are personally familiar, and this, combined with restricted space, must be our apology for omitting, as doubtless we shall do, many others that would be of great interest. But, though Bristol does not export largely, she adds very materially to the comforts and enjoyments of the nation in the way of imports. Through the courtesy of Mr. F. B. Girdlestone, the Secretary to the Dock Board, we give a few statistics in proof thereof.

Imports between 31st April, 1874, and 30th April, 1875 :—

Oils—Palm, Olive, and Salad	...	...	5693 tons
Corn (wheat, barley, beans, buckwheat, maize, peas, and oats)	...	...	1,062,007 qrs.
Wine	...	...	7459 pipes.
Spirits	...	...	4821 pipes.
Resin	...	...	5638 tons.
Dye woods	...	...	1988 tons.
Deals and staves	...	...	1,445,340 pieces.
Timber	...	...	34,740 tons.
Sugar, raw	...	...	74,522 tons.
„ refined	...	...	9336 tons.
Tar and pitch	..	..	8796 barrels.

To shew, moreover, the benefit which what is commonly known as the Free Port movement has bestowed upon Bristol, we append a few more suggestive decadal statistics.

Some years ago a father who desired to make home pleasant, and to interest his sons, devised a scheme by which the dining table could be converted into an impromptu billiard table. The plan answered, was patented, became popular, and now the above-named firm has business relations with nearly every civilized country.

Boot and Shoe Factories.—Fifteen years ago these were not deemed worthy of classification, but were all included under the head of shoemakers. In 1863 we find that the number of manufactories was only six. This number has quintupled, and they furnish employment for upwards of 5000 hands, the wages sheet of Messrs. Derham alone being £50,000 per annum.

Whilst the specialty of Northampton is for men's, Stafford and Leicester for women's, and Norwich for children's shoes, Bristol combines the whole. In the Exhibition of 1851 Bristol carried off the medal for excellence of workmanship, since which period the trade has enormously developed, until it has become one of the staple manufactures of the West. The chief factories are those of Messrs. Waterman and Co., Rupert Street; Derham Bros., St. James's; Jas. Smith and Sons, Castle Street; and Brightman Bros., in Lewin's Mead.

Brass and Bell Foundries.—Brass was first made in England at Baptist Mills, within this city. The works were afterwards removed to Hanham and Keynsham. The chief manufactories are those of Llewellyn and James, Castle Street (1800); Price and Heanes, Redcliff Street (1750); and Adlam and Sons, Ellbroad Street.

Breweries.—The largest in the West of England is George and Co's., Old Porter Brewery, in Bath Street.

There are several others in the city that can turn out 4000 gallons of beer per day.

Carriers.—No observant stranger could walk the streets of Bristol ten minutes without being struck with the name of J. C. Wall, on tilted carts, wagons, and lorries, or failing to note the magnificent array of horses attached thereunto. Mr. Wall is the agent for the Bristol and Exeter and the Great Western Railway Companies. Through his hands passes all of their heavy traffic, and the manner in which the work is done commends itself to the judgment of all business men. The stud consists of about 200 horses. There are upwards of 500 vehicles, 10 barges, and one steam barge for harbour and river traffic. Some five hundred hands are regularly employed.

Collieries.—The deepest pit in the Bristol coalfield is (or will be) probably about 300 fathoms. This is one now sinking for the Bristol Colliery Co. (Limited), at Malago Vale. The whole of the seams are non fiery, worked with naked lights, and run from about five feet to twenty-two inches. Thinner than this they will not pay for working.

In some instances the works spread out underground to a distance of two miles from the shaft.

At Coalpit Heath Collieries the horses employed walk up to and step by pairs into the cage to be drawn to bank when the shift is over. But in the Kingswood and other collieries there are some sixty poor brutes who, having once descended into *Inferno*, never again see the light of day, unless there should happen, that blessing for horses, but curse for colliers, a strike.

The Collieries are Ashton Vale, Bedminster Coal Company, Bitton Golden Valley, Coalpit Heath Collieries; Easton, Hanham, and Whitehall Company;

Kingswood and North and South Parkfield Collieries ; Nailsea, Rangeworthy, and Warmley.

The output of the above averages from 13,000 to 14,000 tons per week. The hands are somewhere about 3500—all told.

Chocolate and Cocoa Works.—J. S. Fry and Sons, Union Street. Established 1728, by Joseph Fry, under Churchman's patent. In 1820 the consumption of cocoa in the United Kingdom was under 300,000 lbs., and the duty was 2s. 2d. per pound.

Last year the duty, which is now only one penny per pound, was paid on 9,000,000 pounds. This is a remarkable fact in social economics, resulting partly from the diminution of the impost, and the consequent reduction in price ; and partly from scientific analysis, which shows that cocoa seeds possess a larger proportion of nitrogen than any other vegetable food.

“One pound of cocoa nibs, when digested and oxydized in the body, is capable of producing a force equal to 4251 tons raised one foot high. The maximum of work which it will enable a man to perform is 850 tons raised one foot.

One pound of cocoa nibs can produce at the maximum 3oz. 85grs. of dry muscle.—*Inventory South Kensington, Article Food.* 100 parts of cocoa contain—

Water	5'0	} Or,	Water	5'0
Albumen	20'0		Flesh producers	22'0
Theobromine	2'0		Force producers	69'0
Starch	7'0		Mineral matter	4'0
Gum	6'0			
Butter	50'0			
Red colouring matter	2'0			
Woody fibre	4'0			
Mineral matter ...	4'0			

Grown chiefly in the West Indies and South America ; that produced in Venezuela, known as Caracas Cocoa, is the best.

The nuts are roasted in revolving cylinders, broken in a mill, and winnowed, the product being cocoa nibs.

These nibs, levigated in stone mills, or ground with sugar in pans having revolving cylinders, become chocolate.

Flavoured to taste, and sold in powder, cakes, or in the shape of bonbons and chocolate creams, the products of this firm are of world-wide reputation.

The machinery is driven by three powerful steam engines, and between five and six hundred hands are employed.

We only add that nine prize medals have been awarded to the firm by the Exhibitions of London, 1851 ; New York, 1853 ; Paris, 1855 ; London, 1862 ; Dublin, 1865 ; Paris (silver), 1867 ; Paris (gold), 1870 ; Moscow, and Vienna.

Corn.—"What great events from trivial causes spring."—When Smith laboured hard to induce a supine Government, fast bound in red tape, to investigate the merits of his screw propeller for steam vessels, and some unknown, but far-seeing, writer in the *Bristol Magazine* for 1841, boldly advocated its merits, men little dreamed that every turn of that screw would cheapen the bread of their children, and that in Bristol alone in one year, the thirty-fourth from that date, 8,496,056 bushels of grain would be landed from foreign ports. This grain comes chiefly from the Mediterranean and the Black Sea ports, in screw iron steamships of great burthen.

So vast an importation requires room for stowage on land, as well as on the water—hence our immense granaries. That of Messrs. Wait and James, on the Welsh Back, will hold 10,000 quarters of corn. Ten years ago to have associated anything esthetical with a granary would have been like speaking of music from a dry grindstone, but anyone who will examine this handsome building of nine stories will, we are sure, agree with us in the remark that beauty and roominess are not incompatible even in a granary. The imports of the above firm alone last year amounted to between 400,000 and 500,000 quarters.

The district thus supplied with grain from Bristol as a centre has radii of at least one hundred miles in length. Thanks to the screw, and the convenience of our noble estuary, Bristol is now the first provincial market for barley (for grinding) in the empire.

Corrugated Iron Works.—Those of J. Lysaght, Barton Hill, are the largest in England. They employ nearly 400 men. Their trade is chiefly export to the colonies. The St. Vincent's Corrugated Iron Works, St. Philip's, and Peters and Taylor, Redcliff Street, are the other manufacturers.

The Corset and Stay Trade.—This is another branch of industry which from a small beginning has risen to the dignity of a staple trade. In 1853 half a dozen sewing machines were introduced, to do the stitching of the heavy makes; these were of the clumsiest description, nor did they find much favour with the trade for some years. Skilled mechanics, however, by the constant improvement of the old, and the invention of new, machines for different portions of the work, have revolutionised the business, so that now there are

at least 1000 machines, and some 2000 hands employed. The average earnings of the workpeople are at least 12s. per week, and Bristol turns out more of this work annually than any other town in the kingdom. A portion of these goods is specially adapted for export, but the bulk is of the finer qualities. The factories are those of Messrs. Chappell and Humphries, Weare Street; Ellis and Co., Old Market Street; G. Langridge and Co., Temple Street; and Young and Neilson, Counterslip.

Cotton Works.—The Great Western (Limited), Barton Hill. Established 1837. In the large room there are 800 looms. They work altogether about 100,000 spindles; the spinning mill has three hundred windows. The manufacture is principally for the East India and the China Markets. About 1500 people are employed.

Clothiers.—This is another of the trades that have been revolutionised by the invention of the sewing machine. Orders flow in from all parts of the world. Coarse reefers for Newfoundland, and light paletots for Brazil: loose coats for the colonies, and emergency suits of mourning beyond the supply power of the country village tailor; jeans and nankeens for India and China, with moleskins for the navy, often start from a warehouse door upon one lorry. Bristol has won a good reputation for quality.

Distillers.—The Bristol Distilling Company (Limited), Cheese Lane, St. Philip's. Established 1780. Converted into a company 1863.

Wm. Butler and Co., Silverthorne Lane, St. Philip's. Works, Crew's Hole, near Bristol, and Upper Parting, near Gloucester. Tar and resin distillers, manufacturers of vegetable black, lamp black, varnishes, and lubricating oils. About 120 men are employed.

Docks.—We have elsewhere mentioned the Floating Harbour or Bristol Dock, the access to which, *via* the river Avon, is about five and a half miles.

It is obvious that a rapid tidal river, full of curves, and with a fall of at least six feet per hour (at spring tides the fall is eight feet per hour), though it may give safe access to the port for ordinary sailing ships, is yet fraught with danger to steam vessels of great length and heavy tonnage. To obviate this difficulty, and secure a share of the Ocean steam traffic of the world, two independent schemes are now rapidly approaching completion.

The one is the Bristol Port and Channel Docks at Avonmouth, commenced in 1868; the other the Portishead Pier and Channel Dock Company, for which the Act was obtained in July, 1871. A homely idea of the position of these schemes may be obtained by extending to the utmost the fingers and thumb of one's left hand. Let the hollow represent the embouchure of the river Avon; the Avonmouth Dock will be at the thumb nail, the Portishead at the nail of the forefinger.

The Act for the construction of the Avonmouth Dock was obtained in 1864. Land to the extent of 140 acres was secured. The water area is about 16 acres, the dock 1400ft. \times 500ft., quayage 3200ft.; depth in dock—spring tide, 32½ft., neap, 22½ft.; over the cill—spring tide, 44ft., neap tide, 36ft. The lock is 450 \times 85ft.—this great width will admit any ship afloat, saving the *Great Eastern*. Vessels of 16ft. draught will be able to enter during nine hours, and those drawing 26ft. about six hours of each tide. The estimated cost is £393,300. It is hoped that this dock will be completed during the present year. Engineer—James Brunlees, Esq.

Goods can at all times and in all weathers be lightered up to Bristol. Railway communication *via* Clifton Extension, Midland, and Great Western. There are immense facilities in the neighbourhood for alkali and chemical works, &c., the Severn shore being sparsely populated, having water and rail access to all parts, and being surrounded by coalfields.

The Portishead Dock Company, taking advantage of a "Pill" (a small creek eroded by a brook) which ran along under the shelter of Portishead Hill, secured about 50 acres of land, and commenced their works in 1873.

The water area of this dock is twenty acres, the depth on the cill at ordinary spring tides nearly 34 feet. It is intended to keep an average depth of 30 feet in the dock by the quay wall. There is a timber pond at the inner end of 13 acres in extent. The lock is 583×66 ft., the quayside, inclusive of the pier (550 feet), measures 3363 feet; the dock *per se* measures 1800×500 ft., but the total floatage from the pier to the end of the timber pond is 4533 feet in length.

The entrance is to the north-east, looking up the Severn; it is land-locked, and sheltered from every wind excepting those from N. to E.N.E.

There is railway communication with the general system, *via* the Bristol and Exeter, Great Western, and Portishead Railways, the latter line running on to the quays.

The engineer is F. C. Stileman, Esq. The works are to be finished in 1876-7.

Of both the above plans it may safely be said that they are necessary to, and will materially aid, the commerce of Bristol. That they will, under proper manage-

ment, be eventually remunerative, there can be not a shadow of doubt, but the apathy and supineness of the great bulk of the citizens have hitherto made the progress of the works in each case both slow and costly.

Floor Cloth Manufactory, Temple Gate.—Established 1782, by John Hare and Company. A cloth of mixed hemp and flax, weighing about 23 ounces to the square yard, woven on the premises, without seam, to any width up to nine yards, is sized and covered on both sides with many coats of mineral paint; each coat, being allowed time to harden, is then rubbed smooth ere another layer is applied. When the ground is thus finished the cloth has increased in weight some six or seven pounds. It is then printed by wooden blocks, in a building eighty feet high. Carriage cloth and japanned table covers are also manufactured. The flax mills of the firm are in St. Philip's; the colour and varnish works at Hill's Bridge. Number of employes, nearly 400, one of whom came into the service in 1798. Prize medals for floor cloth—London, 1851; two ditto in 1862; Paris, 1855; Dublin, two ditto, 1865. For colors, London, 1862.

Flour Mills.—It has often been our lot in exploring rural nooks to come across some old mill, driven by a dark slimy wheel (the mill of the country), especially in Devon or Cornwall. The way to it, down a steep hill-side, a donkey path, by the side of a babbling brook in a ferny combe. Here the boy who brought the grist had often to wake up the miller from his *siesta*, help him to turn on the water, and whilst the corn was grinding he kicked up his heels in the ever-resounding sea, whilst his donkey frolicked in the fat herbage of the

combe, both of them toiling up the steep ascent in the shadows of evening, thankful for a jolly day. Not the less so has it been one to the miller—he has had a grist, and his thumb is white!

Let those to whom this picture is at all familiar take wherry at Bristol Bridge and row down the harbour to Redcliff Back mill (William Baker and Sons). Now resting on your oars, look up to where the nine-storied building dwarfs the tall masts of the steamship from Odessa, discharging her cargo. Note how the full sacks swing up to the top story at the rate of ten per minute, and without going inside (the machinery is all cased, you could see nothing if you went), as you pull slowly away you will conclude there are mills and MILLS in this country. The sleepy miller has here changed into 150 shrewd working men; the combe grist has swoln to 3500 or 4000 sacks a week, the half of which is ground by the semolina process, and the customers come, many of them, from a distance of 100 or 150 miles.

The other mills are those of Grace Brothers, Welsh Back; Richard Kidd, Temple Back; A. D. Morton, Temple Gate, &c.

Iron.—Ashton Vale Iron Company (Limited), Bedminster Marsh. Offices, Albion Chambers.

The Iron Rolling Mills are worked by Mr. Joseph Tinn.

Bush and De Soyres, Bristol Iron Foundry, Cheese Lane. Established 1764. Here the chilled rolls, now so generally used, were first made. The firm are also millwrights, boiler makers, and general engineers.

Lead Works.—The Panther Lead Company (Limited), Avon Street, St. Philip's. Established 1857, for lead

smelting and desilvering. Capper Pass and Son, Bedminster.

Sheldon, Bush, and Patent Shot Company, Cheese Lane, St. Philip's. Works, Crew's Hole, and the old Shot Tower Lead Works on Redcliff Hill. Established 1750. The firm manufacture; they also smelt lead, red lead and desilver.

White Lead.—Charles Hare and Co., Avon Street, St. Philip's. Established 1782. White lead and rolled sheet lead.

Locomotive Works. — Avonside Engine Company (Limited), Cheese Lane, St. Philip's. Established as Stothert, Slaughter, and Co., in 1838. Locomotive, marine, and stationary engine manufacturers. Upwards of 50 locomotives are made here every year, and exported to all parts of the world. From eight to nine hundred hands are employed, and the wages sheet is considerably above £1000 per week. Steam planing, boring, and rivetting machines. The sheds are 200 feet long, and something over 12,000 tons of coal are consumed in the year.

Pickling Timber.—Messrs. Bayly and Fox, of Barton Hill, have extensive premises where they cut and creosote timber for Brunel's longitudinal principle of a permanent way.

Pottery.—The first record that we have of Bristol pottery is in the reign of Edward I. Mediæval earthenware vessels of different periods of local manufacture occur down to the reign of Elizabeth, at which time there was a pottery in full work.

At the close of the 17th century the following occurs as an advertisement:—"China ware (delf), far beyond white Japan, sold by Pattenden, Corn Street, Bristol." Examples of the ceramic art of the dates of 1703, 1722,

and thenceforward are well known to collectors. About 1738-50, Richard Frank, the Bristol delf potter, had his works on Redcliff Back, removing from thence to Temple Back in 1777; continued from that date under Ring, 1788; Ring and Carter, 1795; Pountney and Allies, 1818; Pountney and Goldney, 1837; J. D. Pountney, 1851. The factory is still known by the name Pountney and Co., and is worked in connection with the Victoria Pottery, St. Philip's Marsh. The manufacture is ordinary white and printed ware, which is exported in great quantities.

There are about 250 hands employed. The yearly consumption of coal is 5000 tons, and about 3000 tons of raw material are used. In the counting-house there are preserved four tiles, on which are drawings of the works in 1820, from the pencil of the celebrated China painter Fifeild.

The Bristol China, for which such fabulous prices are now given, was manufactured by Champion and others, at the works which then (*circa* 1765) existed in Castle Green. This factory was closed in 1777.

The glazed stone ware, known as Bristol ware, which superseded the old salt glaze, was the invention of, and was first made in 1835, by the late Mr. William Powell, at the Temple Gate Pottery, still carried on under the title of William Powell and Sons. Several ingenious inventions of Mr. Septimus Powell have greatly simplified and improved this manufacture.

A similar material, known in the trade as the glazed vitrified stone ware, is manufactured by steam power by Messrs. Joseph and Charles Price, Victoria Street and Thomas Street. Established 1740.

Both the above wares are acid proof.

Provision Trade.—The resumption of the ocean steam traffic with America, by means of the Great Western Steamship Company, has given a great impetus to this trade in Bristol, bringing to the front several houses of enterprise, and opening up new branches of business for firms of established reputation.

An approximate estimate of the American trade with Bristol during the past twelve months is as follows:—Cheese, 200,000 boxes; provisions, *i.e.*, bacon, hams, &c., 120,000 cwt.; butter, 60,000 tubs; lard, probably 2000 tons. Immense quantities of barrel flour, meal, Indian corn, and can goods (fish, preserved fruits, &c.) are also imported, but as the larger portion by far come through other ports we have little data to go upon. For instance, the house of H. H. & S. Budgett & Co., have two houses in London, and forwarding agents in Liverpool and Southampton. From each of these ports they supply their customers as a matter of convenience, and to save railway carriage.

The above well-known firm employs in Bristol about 200 hands. Amongst other large importers we name W. Clark and Son, and H. J. Symes and Co., both of Victoria Street. Other firms also import largely through Liverpool.

Ship Builders.—Charles Hill and Sons, Albion Dock, Cumberland Road; Limekiln Dock, Hotwells; and West Bute Dock, Cardiff. Established 1760. Wood and iron.

G. Miller, Dean's Marsh Dock. Wood.

G. K. Stothert and Co., Hotwells. Established 1854. Iron and machinery.

J. Payne, Vauxhall Works, Coronation Road. Iron.

Wapping Dock Company, Wapping; the Great Western Dry Dock. Iron, wood, and machinery.

... ENVIRONS.

...where there been made to
...Though there are now
...British employment
...the memory of men
...were only two kinds
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15 days 10 hours, her homeward passage 14 days. Thus the great problem of ocean steam navigation was solved, and to Bristol belongs the honour of opening out the steam traffic of the world. The same enterprising company built also the Great Britain. But the heavy dock charges, which, like the "Old man of the sea," sat upon and strangled its victims, and the want of dock facilities, drove the ships of this company from Bristol to Liverpool, the immediate result of which change was a falling off in the exports of nearly one half, their value in 1839 being £339,728 12s. 10d., and in 1846 only £150,883 19s. 6d. The Chamber of Commerce, noting this, in the latter year, says:—"The diminution of exports as compared with 1843 arises chiefly from the removal of the Great Western steamship to Liverpool."

It is some little consolation to know that in this generation the Great Western Steamship Company has had its name and occupation resuscitated by those who are alike worthy of its fame and their city. Their ships are the Arragon, Great Western, Cornwall, and Somerset.

Timber.—This is another of the staple trades of Bristol the development of which has been immensely favoured by the reduction of the dock dues, as the following statistics will show:—

In 1842, 47 ships, with a tonnage of 18,393 tons, entered the port. In 1865 these had increased to 123 ships, with a tonnage of 56,000 tons. In 1874 the number of timber ships was 202, having between them 109,000 tons burthen. Dock dues were paid, from April 30th, 1874, to April 30th, 1875, on 34,740 loads of timber, and 1,445,340 pieces (deals and staves). There

Soap Trade.—Reference has elsewhere been made to this as an ancient Bristol trade. Though there are now but two chief manufactories, these furnish employment for nearly 400 persons. Within the memory of men who still work at the trade there were only two kinds of soap made; now there are manufactured forty different sorts. The Broad Plain Soap Works, in St. Philip's, belonging to Christopher J. Thomas and Brothers, is the oldest and largest of the kind in the West of England. Covering many an acre with their buildings, their cellarage is a series of oil tanks, wherein several cargoes of palm oil may be securely stowed. This firm have the only manufactory for composite candles in Bristol; latterly they have added a new branch of industry, the refining of the dark acrid oil of the cotton seed, their trade mark for which is the Assyrian Bull. The other firm is that of Messrs. Lawson, Phillips, and Billings, in the Marsh, who descend from two ancient firms, Whitson, 1608, and Shapland, of Old Market Street. Their works are handily situated on the Feeder canal.

Steam Ocean Traffic.—It was at the meeting of the British Association at Bristol, in the year 1836, that Dr. Lardner made his celebrated assertion that the navigation of the Atlantic from shore to shore was not practicable by a vessel carrying her own fuel. A few spirited Bristol merchants, not convinced by scientific reasoning, formed themselves into a company, and determined to try the experiment. At a cost of £63,000, Mr. Patterson built the Great Western for them. She sailed from Bristol for New York on the 8th April, 1838, returning with a full cargo and sixty-six passengers on the 22nd of May. Her outward voyage occupied

15 days 10 hours, her homeward passage 14 days. Thus the great problem of ocean steam navigation was solved, and to Bristol belongs the honour of opening out the steam traffic of the world. The same enterprising company built also the Great Britain. But the heavy dock charges, which, like the "Old man of the sea," sat upon and strangled its victims, and the want of dock facilities, drove the ships of this company from Bristol to Liverpool, the immediate result of which change was a falling off in the exports of nearly one half, their value in 1839 being £339,728 12s. 10d., and in 1846 only £150,883 19s. 6d. The Chamber of Commerce, noting this, in the latter year, says:—"The diminution of exports as compared with 1843 arises chiefly from the removal of the Great Western steamship to Liverpool."

It is some little consolation to know that in this generation the Great Western Steamship Company has had its name and occupation resuscitated by those who are alike worthy of its fame and their city. Their ships are the Arragon, Great Western, Cornwall, and Somerset.

Timber.—This is another of the staple trades of Bristol the development of which has been immensely favoured by the reduction of the dock dues, as the following statistics will show:—

In 1842, 47 ships, with a tonnage of 18,393 tons, entered the port. In 1865 these had increased to 123 ships, with a tonnage of 56,000 tons. In 1874 the number of timber ships was 202, having between them 109,000 tons burthen. Dock dues were paid, from April 30th, 1874, to April 30th, 1875, on 34,740 loads of timber, and 1,445,340 pieces (deals and staves). There

were seven importers in 1865; there are precisely the same number of firms now. This may be accounted for by the lack of room, every available square yard of land and water, to the extent of nearly thirty acres, being covered with timber stacks and rafts.

Sugar Refining.—This is another of Bristol's ancient trades. Fifty years ago there were ten refineries, but the improved processes of the Messrs. Finzel have tended to place the trade in fewer hands, whilst they give employment to largely increased numbers. The Counter-slip Sugar Refinery of Messrs. Finzel has 25 steam boilers, employs 600 men, and can turn out 1200 tons of sugar a week. Their Bristol crystals have never yet been equalled. The other houses are the Bristol Refinery Company, Old Market Street, and the Castle Sugar Refinery, Queen Street.

Tanneries.—A hundred years ago Bristol leather was the best in the market, but during the early part of the present century men who hasted to be rich devised all sorts of schemes in order more rapidly to manufacture. As a consequence a deal of rubbish was foisted on the trade, and Bristol leather lost its character.

Within the past twenty years the good old plan of giving the hide twelvemonths in the yard has been combined with great improvements in the manufacture, resulting in such success that Bristol now not only produces the largest quantity of any town in the kingdom, but its leather may be said to rival in quality that of any other in Great Britain.

P. S. Evans and Co., of the Avonside Tannery, St. Philip's Marsh, are the largest employers of labour, having over 100 hands. They tan chiefly all kinds of sole leather from South American hides.

The other firms are :—Cox and Shepperson, Bedminster ; Cox Brothers, Clift House ; Vicary Brothers, Sheen Lane ; Macregor Rake, Bedminster ; Hassell and Cogan (various), Baptist Mills ; Perry and Evans (kip tanners), Bedminster ; H. Densham (various), Redcross Street.

Tobacco.—Bristol has won world-wide renown for its manufacture of *the weed*, and Bristol Bird's Eye is the delight of each veteran smoker.

“ The old world was sure forlorn,
Wanting thee * * * * *
Plant divine, of rarest virtue.”

W. O. Bigg & Co., Narrow Lewin's Mead ; Edwards, Ringer, & Co., 90, Redcliff Street ; Franklyn, Morgan, and Davey, 12, Welsh Back ; Hudden & Co., Leek Lane ; Purnell, Webb, & Co., and W. D. & H. O. Wills and Sons, Redcliff Street, are noted for excellence of manufacture.

Wagon Works.—The Bristol Wagon Works Company (Limited)—offices and manufactory, Lawrence Hill ; show rooms, Victoria Street. Established 1866. Employ about 700 hands. Their work may be divided into two branches—one for the home market and the colonies, consisting of wagons, carts, vans, &c., for ordinary roads and for agricultural purposes. The other branch is for railway carriages and wagons. Their trade is cosmopolitan, Sweden, Russia, Austria, Italy, Portugal, Spain, the West Indies, China, South Africa, New Zealand, Australia, Egypt, are amongst their markets, but England, Ireland, South Wales, and especially British India and South America furnish their largest customers. A steamer of 1200 tons burthen, and two sailing ships of 1000 tons each, have

lately been laden in Bristol with their products for South America. The works now cover nearly eight acres of ground.

PERAMBULATIONS.

Bristol has been a county corporate, with peculiar charter privileges, ever since the year 1377. Those who quote it as an integral portion of either Gloucester or Somerset greatly err. Its boundaries, government, rights, and immunities are each peculiar and distinct. The shire authorities have no powers within the County of Bristol.

The County lies on both sides of the Avon; Temple, Thomas, Redcliff, and Bedminster, are on the south side of the river; the Ancient City, Clifton, Redland, Cotham, St. Philip's, &c., are on the north bank. The river, adjacent to the railway station is not the original Avon; it is an artificial trench, known as the New Cut, opened in 1809, to receive the tidal waters when the river bend was converted into a floating harbour.

We will commence our perambulations of the city at the New Joint Railway Station, in Temple Mead, which has a handsome Tudor elevation; its waiting rooms and accessories are lofty, well ventilated, and comfortably fitted; the ticket offices are convenient, and it has upwards of 2000 feet of covered platform. Arrivals by the up lines descend by the incline on the right, between the Station and the Cattle Market, on the left of which the lofty chimneys and massive manufactories of St. Philip's form a conspicuous feature in the landscape. Visitors by the down lines descend the incline on their right, to Temple Mead. Before them rise sundry

wooden structures to a great height ; these are portions of the world-renowned floor cloth manufactory of the Messrs. Hare. Should we now turn to the left, and cross the New Cut, the first turn on the left would lead us to the Cattle Market and St. Philip's Marsh, &c.; Before us is Bath, or Hill's, Bridge, an iron structure of nine girders, each 107 feet long; it is 17 feet above high water, and was erected in 1855, the original bridge having been knocked down by a steam barge on the 20th of March in that year. The colour works of Messrs. Hare abut on the bridge, then follow the Goods, Locomotive, and Machinery sheds of the Bristol and Exeter Railway Company.

We are now in Totterdown, a new suburb which is rapidly covering Pile Hill, once the site of a prison for Frenchmen. The road on the right leads up to Knowle, and so on to Wells. The lower is the new road to Bath, through Keynsham. On it, and about half a mile from the handsome lamp post (known as the Bishop of Bath and Wells, because it stretches its arms out to embrace the two cities), embosomed in the rounded lias hills, is Arno's Vale.

In this lovely, leafy nook our loved ones rest ; it is the great cemetery of the citizens ; the variety and costliness of the monuments are something to marvel at, some of them being exquisite in taste and exceedingly appropriate.

"Here let me lie, in a quiet spot, with the green turf o'er my head,
Far from the city's busy hum, the worldling's heavy tread ;

Where the free winds blow, and the branches wave, and the song-
birds sweetly sing,

Till every mourner there exclaims, "O death, where is thy sting."

Where bright flowers bloom through summer time, to tell that all
was given,

To fade away from the eyes of men, and live again in heaven. '

Opposite, under the Lichgate, is the entrance to Redcliff Cemetery. Adjoining Arno's is that of the Roman Catholics. Then follow the Arno's Vale Reformatory and Nunnery, opposite to which is the curious structure that Horace Walpole nicknamed the Devil's Cathedral. The entrance to this hybrid building is through one of the ancient city gates, which was re-erected on this spot. St. Anne's Wood, a lovely sylvan glade, lies a mile to the east; Brislington village, and Brislington House Lunatic Asylum, lie about the same distance on the main road to Bath.

Returning to Bath Bridge, two roads skirt the New Cut westward. That on the south bank passes St. Luke's Church and Zion Chapel, at the foot of Bedminster Bridge. Here the main road, through Bedminster, bends at a right angle to the left, leading past the Conservative Reading and News Room, the Temperance Hall, the Parish Church of St. John's, &c., on over Red Hill to Wrington, Cheddar, and the Mendips. The downward road by the river's brink leads to Leigh Woods, the Suspension Bridge, and Portishead, or, bending round under the hill, to Long Ashton, Brockley Combe, Clevedon, and Weston-super-Mare. A patriotic citizen has converted this bank of the New Cut into a beautiful boulevard, having, at his own expense, planted it with some thousands of trees. Since these lines were written it has been named Proctor's Boulevard.

The road along the north, or city, side of the Cut passes the New Public Swimming Baths and Wash-houses. Rounding the foot of the hill, on whose northern slope stands that prince of parish churches, St. Mary Redcliff, we note Canynge's Almshouse, the Bristol General Hospital, Bathurst Basin, the south entrance

to the Floating Harbour, and, crossing the lock, we are under the walls of the Gaol. From hence a road on the right leads across the Harbour Railway, *via* Prince Street Bridge, over the Harbour, to Queen Square and the city.

Proceeding onwards, we pass St. Raphael's Church, the Seamen's Almshouses, and so on down to Cumberland Basin. Its locks and bridges, moved almost instantaneously by hydraulic power, are worthy of notice. Over the river is the Clifton Station of the Portishead Railway. Crossing the lower lock, we are now on the bank of the ancient river, as it rushes on through its narrow gorge to the sea. Here, at the Hotwells, is the massive floating landing stage, just abreast of the ivy scärped rock on which projects Windsor Terrace, popularly known as Watts's Folly, the discoverer (through a dream of his wife, so it is said) of the method of making patent shot, having spent all his gains on the foundations of this beautiful terrace.

The Hotwell Pump marks the site of the fashionable Spa, where, amidst the feeble-minded follies of the dying century, young Davy (afterwards Sir Humphrey) was introduced to the scientific world under the *agis* of "Plutonian Beddoe." From hence a beautiful zigzag ascends to Clifton Down and the Suspension Bridge; passing under its ribbon-like shadow, we note the Port and Pier Railway Station, thence a broad, winding road leads, by a gentle ascent, to the breezy downs.

Starting afresh from the Terminus, with our faces due west, we see rising before us, over the conical pottery kilns of Temple Gate, the lofty spire of Redcliff. Pipe Lane, that ancient passage by the side of the Harbour Railway, opens directly into the area under the eastern

corner of the church, where stands a monument, in the Perpendicular style, with a muffin-capped boy for a finial. Bigotry removed this erection from consecrated ground, and expunged the inscription. What matter? Had they buried the whole affair seventy fathom deep, we should never have missed or mourned it. The marvellous boy Chatterton would need no remembrancer whilst Redcliff Church stands; of him, as of Wren, may it appropriately be said

“*Lector si monumentum quaesis circumspice.*”

We turn, however, under the viaduct into the south end of Victoria Street, newly made as a direct way of communication between the city and the railways. Wide, noble, and commanding is this entrance to Bristol. Nearly every conceivable style of architecture, with many a startling novelty, may here be studied. Where the new road bisects the ancient street, a few quaint overhanging gables linger, to shew what Temple Street was when it was the arbiter of fashion—

“The spacious street, where London wares
Display the tawdry pageantry of Fairs.”

History is repeating itself. Here, on the site of an ancient religious house (not a relic of which remains), has arisen a Roman Catholic School, and the Church of the Holy Cross will stand on the very site where the Augustine Eremites sang mass in the 14th century. The lofty showrooms opposite pertain to the Bristol Wagon Works Company, whose enterprise is covering many a rood at Lawrence Hill with sheds and workshops. The neat brick building on our right, at the junction of Temple Street, is the Temple Colston

School. Mounting guard here, with trident and dolphin, stands old Neptune, the gift, 'tis said, of a patriotic plumber of the parish, who thus commemorated the defeat of the Spanish Armada in 1588.

As we glance up Old Temple Street, we take special note of the leaning tower of its church, the long parallelogram of White's Almshouses, and the dingy front of that once famous tavern, the "Rose." At the extreme end the colossal bulk of Finzel's Sugar Works towers aloft; Counterslip Baptist Chapel hides its diminished head in front of it; and, on the right hand, St. Philip's Bridge gives access to the many manufactories of St. Philip's.

On the left of the point of bisection we see the kilns of Price Bros.' celebrated stone ware potteries. Cheddar and American cheese and provision stores, iron merchants' and dry goods warehouses, billiard table manufactories, and foreign importers' stores bring us to the junction with Thomas Street, just against the church of that name; then Robinson's seven-storied paper and printing works, and the spacious Talbot Hotel, like giant warders, guard the Bridge of Bristol.

If, instead of crossing the water into the most ancient city, we, at the bridge foot, turn on the left, we find ourselves in Redcliff Street, unquestionably one of the oldest streets in Bristol, but now being widened and rejuvenated. Morbid tastes may be gratified by a glance at the gateposts of Sykes's Brewery, which are portions of the ancient gallows from St. Michael's Hill; and lovers of "the weed" will recognise the lofty pile which has, like some Eastern Genius, sprung out of the smoke of "Bristol Bird's Eye." The house in which Canynge, the Merchant Prince, entertained Edward IV.,

is now occupied by C. T. Jefferies & Sons, a sight of whose stock of old books would alone repay the visitor. The fine Perpendicular hall, said to have been Canynge's Chapel, with its capital roof, and the oriel behind (which has a flooring of encaustic tiles, religiously preserved), are the gems of the place. Good specimens of carving in a Jacobean chimney piece, bookcase, &c., add to the interest of this relic of the past.

In the open space before us, "pointing to the skies," stands the "Queen of the Western Londe," St. Mary Redcliff. Other pens have dilated upon its beauties and its gradual ancient growth, but to Modern Bristol belongs the honour of thoroughly restoring the magnificent fabric, filling it with stained glass, and completing its beautiful spire (for details see Nicholls's "How to See Bristol"). The first street on the right, on Redcliff Hill, lands you on the lofty red cliff, overlooking the harbour—a fine panoramic view. The second is Guinea Street, leading past an old chapel, to the General Hospital and Bathurst Basin. At the north-east corner of the churchyard is the monument of Chatterton, facing the school, which is at the corner of Pile Street. The district over the hill, to the south-east of the church, is Cathay. This completes our peregrinations on the south side of the harbour.

Crossing now by the bridge, six ways radiate from its northern end. On the right, the River Bank, and Bridge Street; these lead to Old Market Street, and so on to Hanham, Easton, &c. Before us High Street rises on a gentle incline; this lands us in the centre of the city, passing, on our right, mediæval Mary-le-Port Street, and, on the left, the markets. On the north side of the

Church of St. Nicholas (the church on our left), the street of the same name winds away, past the markets for produce and fish, to Clare Street and the Drawbridge; the lower road, south of the church, is Baldwin Street, in which is situated the Back Hall, the seat of the Leather Fair. This street was once the outer ditch, as Nicholas Street was a part of the inner pomerium, of the city. The sixth and last of these radii is known as the Welsh Back, down which we now propose to take the visitor. A fleet of coasters, from Wales, Somerset, &c., lie in tiers, three deep, along the quay. On our right, we note a finely-carved oak door, once the entrance to Spicer's Hall (1371). Within the modest exterior of the business premises of Messrs. Franklyn, Morgan and Davey is one of the finest Jacobean apartments in the West. It pertained to the Langton family mansion. An exquisitely carved door, noble chimney piece, ceiling, and staircase will gratify the visitor, who is always sure of a courteous welcome.

There were, from the 13th century, a few scattered mansions, surrounded by alluvial gardens, pleasantly situated on what had once been a branch of the river From; outside the last or outer wall of the city, and beyond these, lay the Grove, of old a portion of the Canons' Marsh.

Through this, in the 17th century, King Street was constructed. It is a street of many gables, with some fair specimens of modern architecture, and several handsome elevations of an earlier date; it leads to the Broad and Narrow Quays, *i.e.*, the From branch of the Floating Harbour. On the right, at the corner of Back Street, is the group of St. Nicholas' Almshouses. Coopers' Hall, one of the ancient Halls of Guild, has a

good Corinthian front by Halfpenny; behind it is the Old Theatre Royal. The next building of importance, standing slightly back from the street, is the City Library, the oldest Free Library in England, founded A.D. 1613. It contains some good MSS., many works of the 15th and 16th centuries, and one of Grinling Gibbons's masterpieces of carving. Recently brought under the Libraries' Act, a new career of usefulness is opening for this excellent institution. Adjoining it is the quadrangle of the Merchant Venturers' Almshouses, wherein 19 old sailors and 12 sailors' widows are maintained (date, 1696-8). Opposite is the house in which the infamous Judge Jeffreys was entertained by Mr. Town Clerk Romsey. It was here that the mendacious Bedloe hurried to accuse the Queen and the Duke of York of a conspiracy to murder the King. A more grisly king thwarted the villain. Death, with a hand of fever, seized on him, and in a few days he was laid in a pauper's grave, just at the door of St. Mark's. The building at the corner of Marsh Street, with a pair of handsome new iron gates, and a bust of George III. in a niche over the door, placed there in 1790, is the Merchants' Hall. This hall was re-built in 1701. It contains a portrait of Queen Anne, by Kneller, sundry other good pictures, especially of George I., Victoria, and Prince Albert, the last named having been himself an honorary member of the Guild. It is elegantly furnished, and the banquets given therein by the Merchant Princes of Bristol are of the most sumptuous character.

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to the welfare of Bristol and the interests of its trade, and on all public occasions their corporate purse is generously opened for the common good of the city. Thunderbolt Street, the shortest in Bristol, leads on to the Quay in front of the Hall.

On the south side of King Street are several openings into Queen Square, the scene of the deplorable riots of October, 1831.

In the centre of the square is a fine equestrian statue of William III., in Roman costume, by Rysbrach, said to be the finest in England. This square, nearly seven acres in extent, is the rallying point for Bristol's philanthropic and political processions. There are an admirably managed Sailors' Home and a Seamen's Institute and Free Reading Room on the south side. One of the finest and most suitable buildings for a set purpose in Bristol is the handsome lofty granary of Messrs. Wait and James, which extends from Charlotte Street to the Welsh Back; opposite this, but across the water, rises the colossal flour mill of Messrs. Baker and Sons. The river now bends to the east round the Grove, and amid the graceful passenger steamers, the heavier boats for the coasting trade, and the leviathans of ocean traffic, a wall-sided old bomb ship, the Etna, floats lightly with a Bethel flag at the main. This is the Sailors' Church, belonging to no religious sect, but supported by all. It will hold a thousand people, and is popular with the masses.

Two ferries cross the Harbour from the Back and the Grove, and a halfpenny toll bridge leads from Prince Street, at the fork of the Harbour where the Avon and the Fromm meet, to the New Cut. Turning now to the north, under the massive warehouses known

as Acraman's Buildings, we are on the Narrow Quay, the embouchure of the river From; proceeding onwards we reach the Broad Quay, which extends from Thunderbolt Street to the Drawbridge.

Our next route lies through Corn Street and Clare Street over the Drawbridge for Clifton, thence *via* College Green and Park Street to the Queen's Road, Victoria Rooms, &c., &c. We start from the Council House. Note, first, Baily's statue of Justice, which surmounts the façade, begrimed but beautiful. A curious tale belongs to a picture in the Council Chamber, of James II., by Kneller. James and his butcher, Jeffreys, were intensely hated in Bristol. In 1688 the mayor, sheriffs, and town clerk, with eight others, had been ejected from the Council by special commission under the Privy Seal, and twenty-eight partisans of the king were forced upon the city in their stead. The mayor was restored nine months afterwards, but the king's unpopularity was greater than ever. His picture was taken down, and after a while some local dauber overlaid Kneller's work with the likeness of a fat, turtle-fed alderman; Royalty, at a discount, was soon forgotten. So it remained until the late James Curnock was employed to clean and restore the pictures. Through the thin colour of the citizen's flowing wig, he found the tip of a Roman nose peeping that looked promising—the painting was a veritable palimpsest. Obtaining leave, he carefully rubbed off the modern daub, and lo! the long lost portrait of James, by Sir Godfrey Kneller. In the Council House are preserved the original articles of the surrender of the city by Prince Rupert, and the Charter Deeds, which are unique and invaluable, dating from the time of Henry I. The city seals, maces, swords

of state, and plate are of high art and inestimable value; we note particularly a silver gilt salver, of the date of 1573, which, during the riots of 1831, was stolen when the Mansion House was sacked and burned. The thief cut it into 170 pieces, some of them very minute. Offering a portion for sale to Messrs. Williams, goldsmiths, he was detected, and the bits (all save three) being recovered, the thief was finally transported. The above-named tradesmen rivetted the whole together in so skilful a manner that the beauty of the salver is not only unimpaired, but its value is so much enhanced that the late Sir Robert Peel offered for it, in vain, its weight in gold.

The elaborately ornamental façade, in the Venetian Renaissance style, adjoining the Magistrates' Court, is the West of England and South Wales Bank. Its lower story is Doric, the upper Ionic. Emblematic sculptures of the towns in which the company have branches adorn its front; the keystones represent the rivers Avon, Severn, Taff, and Usk, and the Bristol Channel; the group of boys, life-size, personate the arts of banking, die sinking, coining, bank note printing, and commercing with the four quarters of the globe. Its interior is fireproof, well lit, commodious, and lofty; its cellarage is perfect, and altogether it is said to be the *beau idéal* of a Bank. Opened 1857.

All Hallows or All Saints' Church stands opposite, in the lane of the same name. It has a fine statue of Colston, by Rysbrach.

The inner quadrangle of the Exchange, with its noble Corinthian peristyle, has been lately covered with a glass roof, greatly to the comfort of the merchants. Behind this building are the markets for

vegetables, fruit, meat, and fish. The first street upon the right is Small Street, wherein stands the Post Office, built 1868. It is a curious fact that, after a lapse of some one hundred and sixty-eight years, the Post Office should have been rebuilt almost upon its original site. It was at that time in Colston's House, all that remains of which is enclosed in the Law Courts. The earliest mention that we have of the office is of a room set apart in 1670 for postal purposes, somewhere near the Exchange, to which locality it was afterwards again removed from Colston's House. In 1700 there was an agreement for leasing a piece of ground "for building a Post Office, which is to have the second story extended *by a truss of eighteen inches over the lane, for the purpose of shielding the persons coming to the Post Office from the rain.*" Somewhat of a contrast with the present commodious building, which is in the Palladian style. Still more marked is the contrast as to its work. Through the courtesy of Mr. Sampson we are enabled to append a few striking statistics, which will shew its deserved success under the present able management:—

STATISTICS OF POST OFFICE, BRISTOL.

	Clerks.	Letter Carriers.	Letters, &c.
1820	4	...	13
1841	..	...	46,000 weekly.
1851	25	...	35 .. 109,000 weekly.
			Letters. Newspapers. Books.
1871	...	...	200,000 ... 17,000 ... 17,000
			Letters. Newspapers, &c. PostCards.
1875	50	...	101 ... 230,000 ... 51,000 ... 22,000

Money Orders.			Savings Bank.		
1834	About 300 a year issued	... nil	...		
1851	„ 20,000 „				
	Issued.	Paid.	Deposits.	Withdrawals.	
1875	44,000	140,000	10,956	...	4272

Telegrams.

	1873-4.	1874-5.
Total Number Outwards, Inwards, and passing through	819,509	882,003
Telegraph Staff—1875, Clerks, &c.,	101	messengers, 61.

Behind the Post Office are the offices of the *Times and Mirror* and *Felix Farley's Gazette*. *Felix Farley's* was established 1749. On the opposite side of Small Street we have the western Perpendicular Gothic front of the New Law Courts, erected 1870; the Courts of Assize, Tolzey, Quarter Sessions, and the County Courts are holden here. Under the same roof are the School Board offices and the Law Library—in the latter are preserved a fine mullioned window, Gothic chimney piece, and the pannelled ceiling of a portion of Colston's House, in which Charles I. and his two sons were entertained in 1643.

The Bristol Water Works Company occupy another ancient mansion, on the left hand side of Small Street.

In Corn Street at present stands St. Werburgh's Church (doomed to demolition). Under its shadow is the beautiful Ionic portico of the Commercial Rooms, the rendezvous of the Bristol merchants. The bas-relief is by Bubb. It represents Britannia, Neptune, and Minerva receiving tribute from the four quarters of the world. Statues of Commerce, Bristol, and Navigation adorn its summit. Subscription, 50s. per annum.

The Lancashire Insurance offices are next the

Exchange, on the left hand. The chaste front of the London and Lancashire, erected 1865, is the next, followed by the bank of Messrs. Miles and Harford ; then the beautiful façade of the Imperial and the elaborately ornate buildings of the Liverpool, London and Globe tower proudly aloft. An insignificant passage leads to the Athenæum, which has a good lecture hall, newsroom, and library. The Wilts and Dorset Bank, in the Liverpool Chambers, succeeds, then Stuckey's Bank corners Corn and Nicholas Streets.

On the right the Royal Insurance buildings adjoin the Commercial Rooms ; the Old Bank, with an appearance that justifies the name, and the handsome façade of the National Provincial Bank bring us to Clare Street, which is a continuation of Corn Street. Here the ancient city wall once had a three-cornered gateway, in line with Nicholas Street and St. Leonard's Lane.

That "Gothic version of an old Italian campanile, magnificently worked out, having esthetically dispensed with buttresses" (as E. A. Freeman, Esq., describes St. Stephen's), rises on our right hand. In the area stands the oldest Savings Bank in the kingdom ; it has 12,000 depositors, and over £450,000 in the hands of the Government. Marsh Street is on our left ; it leads to Prince Street and Queen Square. Before us is the fork of the Floating Harbour that forms the embouchure of the river Frome. We cross it by a swivel Drawbridge.

On our right hand, over the water, is St. Augustine's Bank, on which stand the Roman Catholic Church of St. Mary and Waterman's shoe factory. Christmas Steps, the Old Gatehouse of St. Bartholomew's Hospital, Brightman's shoe factory, the Oddfellows' Hall, Lewin's



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On the south side of King Street are several openings into Queen Square, the scene of the deplorable riots of October, 1831.

In the centre of the square is a fine equestrian statue of William III., in Roman costume, by Rysbrach, said to be the finest in England. This square, nearly seven acres in extent, is the rallying point for Bristol's philanthropic and political processions. There are an admirably managed Sailors' Home and a Seamen's Institute and Free Reading Room on the south side. One of the finest and most suitable buildings for a set purpose in Bristol is the handsome lofty granary of Messrs. Wait and James, which extends from Charlotte Street to the Welsh Back; opposite this, but across the water, rises the colossal flour mill of Messrs. Baker and Sons. The river now bends to the east round the Grove, and amid the graceful passenger steamers, the heavier boats for the coasting trade, and the leviathans of ocean traffic, a wall-sided old bomb ship, the Etna, floats lightly with a Bethel flag at the main. This is the Sailors' Church, belonging to no religious sect, but supported by all. It will hold a thousand people, and is popular with the masses.

Two ferries cross the Harbour from the Back and the Grove, and a halfpenny toll bridge leads from Prince Street, at the fork of the Harbour where the Avon and the Fromm meet, to the New Cut. Turning now to the north, under the massive warehouses known

Mark (the Mayor's Chapel), we note, as we commence the ascent of Park Street, the Freemasons' Hall, built by Sir R. Cockerell, 1820. Bristol has from time immemorial worked the highest degrees of Masonry. The American Freemasons claim descent from the Bristol lodge. Great George Street, on the left, leads up to Brandon Hill. At No. 10, Park Street, Hannah More lived, and, with her sisters, kept a school.

The Blind Asylum and its neat little church face the top of Park Street. Sixty inmates of both sexes are here installed, and are taught suitable trades. They cultivate music, and their open concerts on Mondays, at three p.m., are charming. Visitors' days—Monday, Wednesday, and Thursday—hours, eleven to twelve, and two to four. The next block of buildings was erected for the Bishop's College; it is now the Volunteer Club House. The Drill Hall is 150 × 90 feet. The new building in the Venetian style, with a broad flight of steps, is the Bristol Museum and Library. The Library, which was founded in 1772, possesses about 40,000 well-selected and valuable volumes. The subscription is a guinea and a half per annum.

The Bristol Institution, which was established in 1823 for the Promotion of Science and Art (the Freemasons' Hall was originally built for this Society), is now amalgamated with the above named Library. It possesses an excellent museum, rich in geological specimens, some rare antiques, a complete set of casts of the Elgin marbles, and a good natural history collection. The spirited proprietors are adding a laboratory, philosophical instrument rooms, and a spacious lecture hall. Baily's statue of "Eve at the Fountain" is one of the gems of the institution. This building is also the

head quarters of the Bristol Naturalists' Society, the Bristol Pharmaceutical Association, the Bristol Microscopical Society, the Bristol and Gloucestershire Archæological Society, and the Clifton Debating Society.

Through Berkeley Square, which is opposite the Museum, there is a footpath to the top of Brandon Hill, from which we have the finest panoramic view of the city and the valley of the Avon. On this ancient fort two Russian guns are planted.

Continuing onward through the Royal Promenade in Queen's Road, we see before us the Victoria Rooms on a commanding site. Its handsome façade has a noble portico, supported by massive Corinthian columns, that bear a rich entablature with classic carvings in high relief, representing "The Advent of Morning." A broad flight of steps, flanked on either hand by colossal sphinxes, leads up to the rooms: this gives a charming effect. Erected by a company in 1840, at a cost of £20,000. The large saloon, 117 × 55 feet, is elegantly decorated, and contains a fine organ, that was built for the Panopticon in London. On the hill upon the left hand stands the unfinished Roman Catholic Cathedral, and the convent of St. Katherine, where forty poor children are maintained and educated by the sisters. On the right, fronting the Victoria Rooms, is the Bristol Fine Arts Academy, a handsome elevation in the Venetian style, somewhat profusely decorated. It was erected in 1858, chiefly through the munificence of Mrs. Sharples, a widow lady resident at the Hotwells. There are some paintings by Bristol notabilities of the last generation; the Nineveh Marbles, presented by Sir H. Rawlinson; three large paintings by Hogarth, from the Church of St. Mary Redcliff, &c. An exhibition of

modern pictures is held annually in March. Open free of charge to artists, to study from the antique or from life. A small charge is made during the exhibition ; at other periods visitors are admitted on application to the secretary. The Government School of Art is held on the ground floor.

The Bristol and Clifton Chess Association have their head quarters in the above building. Their sederunts are on Wednesday and Saturday, in the afternoon.

The fine boulevard before us is the White Ladies' Road. Tyndall's Park Road, on our right, leads us past the new Decorated Gothic Church of St. Mary the Virgin, to Highbury's ivied tower. This handsome Congregational Church stands on the site where the martyrs suffered by fire in the reign of Queen Mary. On our left is the practice ground of the Volunteer Artillery. Oakfield Road Unitarian Gothic Church, an elegant edifice, thoroughly ecclesiastical in style, is a short distance from the road on the left hand. Erected in 1864, it cost £6000. Pembroke Iron Chapel, a temporary structure erected for the Congregationalists, is in the same road.

The Clifton Extension Railway Station is on our left. This little loop line gives access to all the main lines of rail. Running westward through a tunnel 1740 yards long, and at an average of 160 feet from the surface of the Downs, it has its terminus at the junction of the rivers Avon and Severn, just by the new Avonmouth Docks.

Passing Tyndale and the new Wesleyan Chapels, we note Redland Park Congregational Church, all on our right hand. The Church of St. John's, with its twin pierced turrets, is on our left.

Ascending the Black Boy Hill we are on the breezy Downs. The road on the right leads down to Redland and Cotham; the next will take us to Westbury, Henbury, Blaize Castle, &c. The narrow way straight before us is an accommodation road to Down House; that inclining to the left, which passes the Water Reservoir, embosomed in a tuft of trees, leads to Stoke Bishop. The sharp-angled road on our left skirts the Down, passing Belgrave Terrace, the end of Pembroke Road, the Zoological Gardens, and so on to the Hotwells or to Clifton.

On the triangular bit of land facing Pembroke Road the gibbet once stood. Down this flower bordered route we see the massive towerless pile of All Saints' Church. Avenue Road, the next on our left, has for a terminal point the Church of Emanuel.

The Zoological Gardens abut on this roadway. They contain the finest collection of animals out of London, and are open daily at an entrance fee of sixpence.

Behind these gardens are the church, school buildings, and close of Clifton College.

At the five crossways junction stands a pretty fountain, erected by Thomas Proctor, Esq., one of Bristol's large hearted citizens. The thorn covered ravine behind is dotted with fragments of *valla* and *fosse*, with a new winding zigzag that leads down to the water side. This spot is known as Fairy land. The road, "all broad and winding, and aslope," leads to the river's brink, the Port and Pier Railway Station; and the Cumberland Basin.

The tree-shadowed avenue road inclining to the left passes Clifton Observatory Down, that which runs at

a rectangle on the same side will bring us to the New Mansion House, the munificent gift to the city of Mr. Alderman Thomas Proctor. It has magnificently fitted reception and banqueting rooms, rooms for the judges, the judges' associates, and the mayor, also a spacious billiard-room, all of good proportions, elegantly furnished, and chastely decorated. Shields of the arms of Bristol's ancient worthies suitably adorn its entrance hall. Indian and Turkey carpets, silk hangings of richest dye, easy lounges, and the softest of sofas here offer some compensation for the stately, but, we should judge, far from comfortable, judicial bench. The furniture of the banqueting hall is of solid Riga oak, and that of the reception room of oak and gold inlaid with walnut, Jacobean in style, designed and manufactured by Mr. C. Trapnell, of this city. In one of the rooms is a unique Belgian cabinet, filled with rare old Bristol china, the gift of another worthy Bristol citizen, Mr. Robert Lang. The Promenade leads us to the Observatory hill on Clifton Down, an ancient Roman camp. The view from hence is surpassingly beautiful—away over the valley of the Avon in the east we see the rounded oolitic hills beyond Bath; before us lies the abyss through which meanders the Avon; the rocky bluffs and wooded ravines of Leigh colour its southern shore; and on both sides the river is fringed by lines of railway, that sweep, ribbon-like, away to the west, where shines the silvery Kingroad, bounded by the lofty Welsh mountains. On our left the Suspension Bridge, airy as gossamer, spans the gorge. One can scarcely conceive, as one gazes on this apparently fragile structure, that it will carry a burden of 7000 tons, and that its net weight is 1500 tons. Its span is 702ft. 3in.; the

height from low water 287 feet. Its chains have 4200 links, each 24 feet long and 7 inches wide. The towers over which they swing with graceful sweep are 70 feet high; the chains on the land side are anchored down in pits 70 feet deep. One hundred and sixty iron rods, that vary in length from 3 feet to 60 feet, suspend the roadway to the chains. This beautiful structure was opened in December, 1864. It has cost altogether more than £100,000.

The St. Vincent's Rocks and the Clifton Down Hotels both command fine views of the bridge, and are each within a furlong of its entrance.

As we turn to the right, down Rodney Place, we thread the site of the ancient village of Clifton. On our right are the Mall, the West Mall, the Club House, &c. Passing the narrow entrance to Victoria Square, which, had the buildings been carried out on the original plan, would have been one of the finest in Europe, we note on our right the fine sweep of the Royal York Crescent. For breadth and beauty of prospect, salubrity, and quiet comfort, this terrace is perhaps unequalled.

Clifton parish church stands on a site that could with difficulty be paralleled. From all the western parts of the city and the vale of the Avon it is visible, yet this "cynosure of every eye" in its ugliness is a standing disgrace to our wealthy Cliftonians. Below, as we stand on its God's acre, divers roads diverge, down the hill, or through Clifton Wood and Clifton Vale to the Floating Harbour. The eye rests on the huge piles of timber, covering many a rood, the forest of lofty masts that wind away up into the very heart of the city, until the vision is lost amidst a maze of chimneys and steeples, whilst Dundry Hill, with its striking church tower,

rounds up the fertile valley, and the Mendips bound the horizon.

We take the straight and the steepest road, passing at the bottom of the hill the neat Almshouse erected and endowed by the late Mr. Hill. The massive building before us is Queen Elizabeth's Hospital (the City School). Six hundred years ago it was the Jews' burying-place, and many of their tombstones were used in the foundation, so that it has been wittily said that, "whatever the scholars lack, they always have a good Hebrew foundation." Two hundred boys are here fed, clothed, and educated. Each well-behaved boy has £10 given to him on leaving school as an apprentice fee, with permission to choose his trade. We emerge opposite the Museum and Library, but instead of passing down Park Street we keep the level road by the Blind Asylum, which brings us to the New Theatre, erected by Mr. Chute in 1867. A terrible catastrophe happened here on Boxing Night, 1869: eighteen persons lost their lives through overcrowding the entrance to the gallery and pit.

The Certified Industrial School for Boys is on our left; the Synagogue of the Jews nearly adjoins; and at the upper corner of Lodge Street stands the well-known Reformatory for Girls, superintended by Miss Carpenter, and known as the Red Lodge. This building, erected by Sir Jno. Young 1600, has a fine Jacobean pannelled room, with elaborate carvings and ornamented ceiling.

We now turn down on the right. Before us Christmas Steps lead to the old remnant of the Bartholomew's Hospital, the Stone Bridge, and St. John's Gate. (This is the shortest way to the centre of the city, or to the Railway

Station.) We turn again to the right down Colston Street. The building to the right is the front of Colston Hall. Justice is not rendered to this magnificent Hall by its façade, which is dwarfed and meagre when compared with its well-proportioned interior. The great hall will accommodate about 2700 sitting, 6000 standing. It is 146 feet long, 80 feet wide, and 70 feet high. There are in the building two other halls; one has sitting room for 700, the other for 400 persons. The organ is by Willis. It has 4 manuals, 60 draw stops, is blown by 3 hydraulic engines, and cost more than £3000. This building was erected by a few large hearted citizens to supply a felt want; medallion likenesses of four well-known and respected citizen shareholders have been placed in the spandrils of the arches in the great hall. Before us we again see the Drawbridge and the ancient city.

Yet one other walk ere we part company. Turning down Broad Street, from the Council House, with our faces to the north, we have, on the left, the office of the *Western Daily Press* and the *Observer*. These newspapers are printed by the patent machine of Messrs. Duncan and Wilson, which delivers them folded from the press at the rate of 125 per minute.

The colossal building on the right is the Grand Hotel. It stands on the site of the old White Lion (which dates from 1606) and two other ancient hotels. It has 120 bed and sitting, besides stock, club, commercial, coffee, and ladies' rooms, with drawing rooms, and a large banqueting hall. It contains 560 windows, and was erected by a company in 1869.

Exactly opposite the hotel is the Branch Bank of

England, below which we note the Guildhall, a building in the Tudor style. The statues which adorn its front are those of Victoria, Edward III., Charles II., Foster, the Recorder, Colston, and Dunning. St. John's Street, on the right, leads us to an ancient gate in the city wall, here twelve feet thick. Over this gate once stood the Dove Tower.

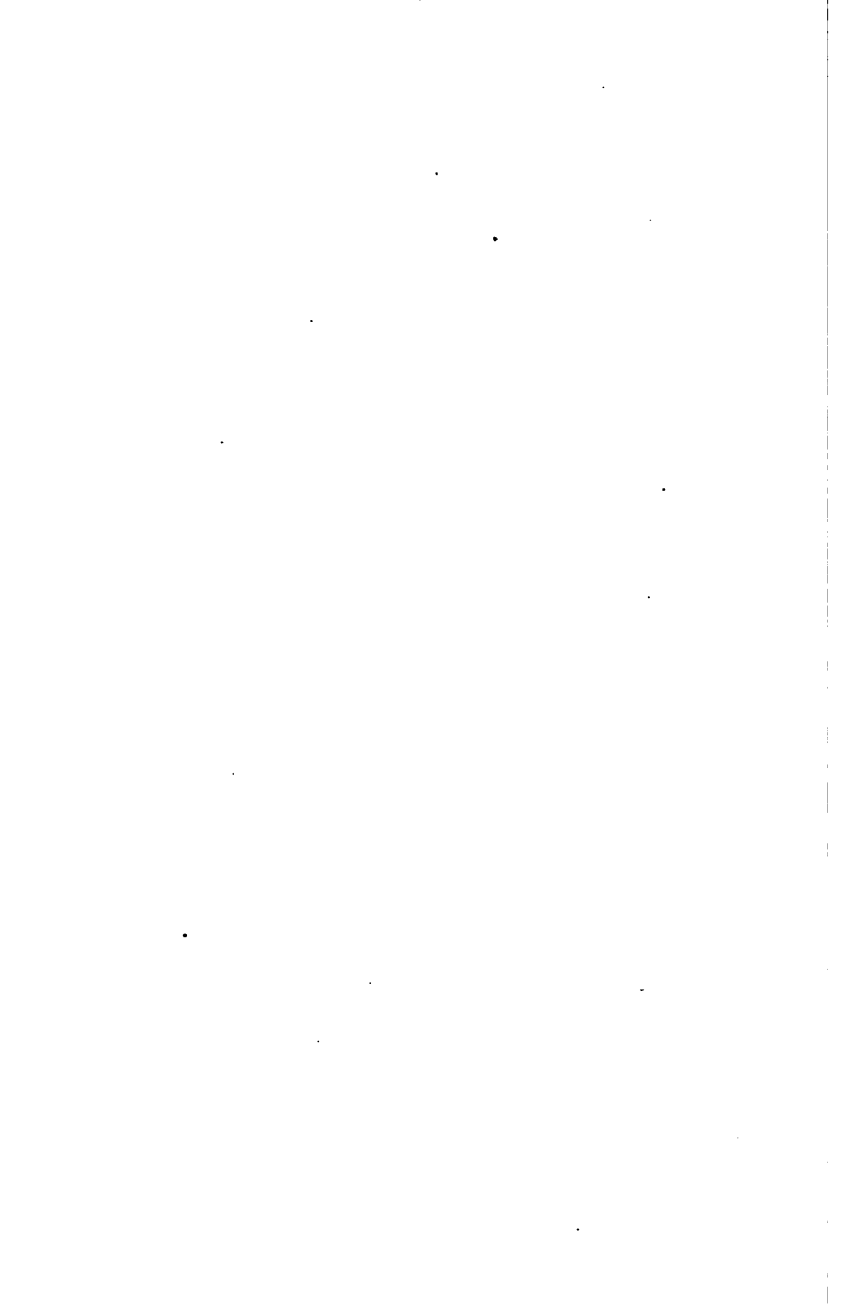
A few doors further on, upon the same side of the way, are the offices of the *Bristol Daily Post* and the *Bristol Mercury*; the latter, a weekly newspaper of large circulation, dates from 1789.

The tower of the Church of St. John the Baptist, with its arched gateway of the 14th century, is before us; the side arches for pedestrians were added during the present century. This church formed a portion of the city wall. The defaced statues over the spandrels are said by tradition to be those of Brennus and Belinus. They are undoubtedly older than the building in which they have found a niche. Bell Lane, on the left, was the scene of the fires kindled by Jack the Painter, who, for incendiarism in Portsmouth Dockyard, was hanged.

Emerging from the gateway, we have, on our left, Quay Street, on both sides of which are the warehouses of D. H. Walsh & Co., clothiers. Adjoining the northernmost, and fronting towards the harbour, are the neat premises of the Bristol City and County Club. On the right of the gate we have Nelson Street, wherein are situated the Trade School, an admirably effective scientific seminary, and the roomy warehouses of the Budgetts, worthy sons of a worthy sire (the "Successful Merchant"). At the corner stands the Bridewell, opposite to which is the Central Police Station.



BROAD STREET - ST. JOHN'S CHURCH, AND ANCIENT GATEWAY.



Did we continue onwards through Nelson Street we should pass Fry's Cocoa Works, the end of Union Street, and so get into Broadmead; but instead of so doing we keep onwards from St. John's Gate through Christmas Street, leaving the Oddfellows' Hall and Lewin's Mead Chapel on the right, glance at the 13th century gateway of the Bartholomew's, and ascend Queen Street, now better known as Christmas Steps. Before us the second road on the left, previously described, winds away at an easy gradient to Clifton.

St. Michael's Church tower lifts its battlements above the lime trees that shade the path to the hill whereon once stood the Royal Fort, but whose great attraction now is the Children's Hospital. Scrupulously clean, comfortable, yea, beautiful, are all that appertains to this most excellent charity; "'tis like a little heaven below" to the squalid children who therein find, for a season, a real home and a loving mother. About one-fourth of the cases come under the heads of skin disease and pneumonia, arising, in too many instances, from the want of proper care and attention at home. Many of the inmates never slept in a bed before they were brought here, and their rags have often to be cut from them and burned. Now—what a contrast! all is sweet! clean! beautiful! the most fastidious lady in the land could find nothing to object to, but as she passed through would possibly desire some of the adjuncts for her own boudoir. Wardian cases, aviaries, walking elephants, talking dolls, living pets, pictures, and toys are provided with a liberal hand, and are a source of constant enjoyment to the little sufferers. Seven gentlemen—at the head of whom, as Honorary Consulting Physician, is J. Beddoe, M.D., F.R.C.P. and F.R.S.—

constitute the medical staff. We hesitate not in saying that a visit to this Hospital will be remembered as one of the pleasant things in a lifetime. Visitors admitted every day from 2 to 4 p.m., except on Wednesday and Sunday.

Returning from this digression, to Christmas Steps, we take the road on the right—Maudlin Street. The hill paths on our left lead up to Kingsdown, Cotham, and the Elm Tree Avenue (Lovers' Walk). The Lewin's Mead School, Moravian Church, Welsh Baptist Chapel, the Guardian House, the Penitentiary, and the Church of St. James-the-Less being passed, we reach the Royal Infirmary in Marlborough Street, founded by John Ellbridge in 1784; the east wing was added in 1788, the west in 1805, and two new wards in 1868, the latter being at the sole cost of the late Mr. T. W. Hill. This noble institution can accommodate 240 in-patients; they average about 2500 per annum, besides 18,000 out-patients.

The Convent of St. James, or the Home and School of the Little Sisters of Mercy, is at the corner of Dighton Street (a continuation of Marlborough Street which leads on to Stoke's Croft); a few rods below, beyond the ancient block of buildings, divers ways lead to the Presbyterian Church, the Church of St. James, the Haymarket, and the Arcades. Still pressing onwards we cross through King Square, and soon emerge into Stoke's Croft; an onward route would now lead us to a spot whence many roads radiate. Those on the left are Ninetree Hill and Sydenham Road. The straight one, after a furlong is passed, bifurcates at Arley Congregational Chapel. On our right hand are two roads—that which diverges to the left is Picton Street, the

nearest way to the Orphan Houses on Ashley Down. We retrace our steps, and, passing city wards down Stoke's Croft, note, on our left, the Bristol Baptist College; a visit to its library will repay the *literati*. Some good old Bibles, notably the unique copy of Tyndale's first English Testament, illuminated missals, MSS., and Cooper's miniature of the Protector, for which Catherine of Russia offered £500, may be specified.

City Road recurves on our left hand. At its corner is a Baptist Chapel. Beyond it we bend round to the left through North Street into the Barton; thence a long straight street, on the left, leads into Brunswick and Portland Squares. In the former is a Congregational Chapel with a good classic front; in the latter the Church of St. Paul, a hybrid affair, with a storied steeple. There is a narrow passage also on the left, out of the Barton into St. James's Square, wherein is the flourishing Young Men's Christian Association, Institution, and Reading Room.

Downwards, we now pass through Barr's Street into Old King Street. On our right is the fine old Wesleyan Chapel, and on our left hand the Baptist Chapel Broadmead on the right, Milk Street and Rosemary Street on the left hand, are passed, and we are in Merchant Street, facing nearly all that is visible of the old castle.

Newgate Prison, in which Savage died, once stood at the corner of this hill, within an ancient gateway. We turn to the left hand, along what was once the castle ditch. Above us, now used as a carpenter's shop, are the remnants of some of the offices and dungeons of the castle. It was down this way that Charles II. rode,

on his way to Leigh Court, dressed as a serving man, and having Miss Lane, his ostensible mistress, on a pillion behind him. A short forward walk would bring us, *via* Queen Street, to St. Philip's Bridge across the river, but we stop at the intersection of Castle Street and the Old Market, taking a turn, on our left, up the latter. Here we note one, perhaps the very last, of the tradesmen's signs which, two centuries ago, were hung out over nearly every shop. It is a figure of old Father Time, denoting a watchmaker's business.

Stevens's Almshouse, with a fat boy in the Elizabethan dress stuck up at the end of the quadrangle, and a branch of the Trinity Almshouses, are on our left hand.

The lanes on that side lead down to Redcross Street, where Sir Thomas Lawrence was born, to several old burial grounds, the excellent Redcross Street School, and a large Wesleyan Chapel.

The crown of the hill is the site of Lawford's ("Hlaford," the Lord's) Gate. In the street on the left stands St. Jude's Church, in the centre of the old Bullring. Gloucester Lane, an infamous purlieu, comes next, on the left, then the "Lamb Inn," notorious as the scene of the Molly and Dobby witchcraft in A.D. 1761. Before us is Trinity Church, in a spacious churchyard; on our left, the St. Philip's Literary Institute, now undergoing conversion into a Branch Free Library, under the Act, the Police Station, County Gaol, the Catholic Church of St. Nicholas, Pennywell Lane, and Stapleton Road, in the latter of which there is a new Congregational Church.

The road before us runs to Easton and its collieries; a diverging one to the right, through Redfield to Kingswood, passes by Lawrence Hill, its Independent Chapel,

and the capacious works of the Bristol Wagon Company

On our right hand are the suburbs of Newtown and Barton Hill.

Crossing the road at Trinity Church, we return down the southern side of Old Market Street. The broad road at the top, on the left hand, is the main artery into St. Philip's and its crowd of factories. Here, in the Batch, we find the Midland Station for Bath, also their goods station, opposite to which stand chapels belonging to the Brethren and to the Primitive Methodists. Close by are the Church of Emanuel and the Kingsland Road Independent Chapel. Trinity, or Barstaple, Hospital, with its ancient chapel, occupies the upper corner of Old Market Street. Under the second open colonnade, before the "Stag and Hounds," for centuries the "Pie Poudre" or Dusty Foot Court was holden; here the thief was seized, sentenced, and punished instant. This relic of a Saxon age, together with its successor, the Tolzey Court, is now incorporated into, or at least blended with, the County Courts.

We now enter Castle Street from the east, over the covered ditch that once boasted of a drawbridge into the castle. This street was made on the demolition of the castle, in the days of the Protector. The rollicking, riotous, unfilial Curthose, Stephen with the yellow hair, fair Eleanor of Brittany, Edward II., who perished so miserably at Berkeley, Hugh de Spenser, that sad old man of 90, who was hanged up in his armour, and whose body was cut up and given to the dogs, Bailey, Green, Wiltshire, were each in their turn prisoners within the castle walls. A fragment of the entrance to the banqueting hall, in Tower Street, is all that remains to shew its ancient grandeur.

Passing the Church of St. Peter, with a Norman tower, we note behind it the gabled mansion of the Nortons, now known as St. Peter's Hospital, in which the Bristol Corporation of the Poor hold their weekly sederunt. Poor unfortunate Savage, the poet, who, having wearied out his Bristol entertainers by hauteur and sponging, turned upon and libelled them, dying in gaol, was here buried, in front of the ancient mansion, by Dagge, the gaoler, at his own expense. A narrow street before us is rapidly losing its mediæval character. Mary-le-Port Street, whose overhanging attics at one time came so near to each other that hand-shaking might have been effected from both sides of the way, leads us into High Street, and finishes our circumambulation.

Restricted space has compelled us to leave out much that would have been of interest to many readers; we submit to the inexorable, and make way for others.





BRISTOL AND ITS ENVIRONS.

SECTION IV.

Local Government and Taxation.



HE Imperial Government of Bristol, as a matter of course, has differed but little from that of the other cities and towns of the kingdom, except that being a place of considerable importance, both from its situation, and the enterprise of its merchants—the inhabitants received many favours from the reigning sovereigns—and during the periods of civil commotion through which the country passed at various times in its history, it was always an object of great consequence to the contending parties to obtain possession of the town and castle of Bristol; and the city stood several sieges during these eventful times.

As regards Imperial Taxation, it may be interesting to some to know what portion Bristol contributes to the great total, which constitutes the amount of the national contribution for the maintenance of public credit, the

support of royalty, the army and navy, the great offices of state, and the other expenses of government.

The following statement,* though not complete, will in part supply this information:—

Year.	The Revenue of the Bristol Post Office.	Gross amount of Customs Revenue received at Bristol.	Inland Revenue received at Bristol.	Totals.
1862	£35,720	.....	.. .. .	.....
1863	38,115	.....	.. .. .	.....
1864	40,447	£1,103,000	.....	.....
1865	42,124	1,106,211	.....	.....
1866	42,179	1,174,181	£493,654	£1,711,014
1867	43,103	1,110,387	523,865	1,677,355
1868	46,008	1,120,439	526,556	1,693,003
1869	46,695	1,183,861	525,651	1,756,207
1870	47,820	999,563	521,742	1,569,130
1871	... ..	878,621	464,647	.. .. .
1872	Cannot obtain these returns.	1,030,132	483,584	.....
1873		941,679	513,405	.. .. .
1874		.....	461,254	.....
1875		.....	467,091	.. .. .

The amount of the Customs Revenue and the Inland Revenue, would not necessarily be a correct indication of the trade of the port in any particular year, as they vary considerably from the fact of the alteration of the rate of duties, and the drawbacks consequent thereon; but it may be noticed that Bristol stands *fourth* of all the seaport towns in the amount of Customs Revenue received.

When it is remembered that, according to Lord Macaulay, the total revenue of the country in the year 1684 was £1,400,000 per annum, it is curious to observe that the City of Bristol now contributes more than the amount of revenue of the whole kingdom in that time.

* For these returns I am indebted to Samuel Morley, Esq., M.P.

In considering the local question there is, however, an important difference to be borne in mind, as to the amount raised for Imperial purposes in a seaport, and that for local rates; the former being not necessarily contributed altogether by the inhabitants of the port, but a portion, at least, of the Customs and Excise Revenue would probably be paid by merchants and others who import and bond here, but who are not either inhabitants or ratepayers of the city; whereas, in the case of local rates, they are borne exclusively by those who are locally connected with Bristol—as inhabitants and ratepayers—and must be treated as entirely a *local* burden.

THE LOCAL GOVERNMENT AND TAXATION OF THE CITY OF BRISTOL.

Bristol was an important town and seaport from an early date in English History, being for a long period the second town in the kingdom. It possessed many charters and privileges granted by various sovereigns; the earliest on record being one of Henry II., A.D. 1164,* which enacts that the Burgesses of Bristol shall be “free of toll, passage, and custom, throughout the king’s realm of England, Normandy, and Wales, whenever they shall come, they and their goods.” This king, also, by a later charter, granted his City of Dublin to the men of Bristol to inhabit, which they were to hold of the king and his heirs, “well and peaceably, freely and quietly, wholly, fully, and honourably, with all the liberties and free customs which the men of Bristow

* For many of these statements I desire to acknowledge the obligation I am under to Mr. John Taylor’s interesting work “A Book about Bristol.”

have at Bristow, and through my whole land." This gift was confirmed by Prince John in 1185; and its reality is proved by a charter of a century later, setting forth the "Rights of Dublin Citizens," wherein they claim to enjoy "all the liberties and free customs which the Burgesses of Bristol have, as contained in the Charters of Henry II. and John, his son; also to have their reasonable guilds, as the same Burgesses of Bristol have."

Henry III. (A.D. 1216), immediately after the death of King John, came, with his councillors and tutors, to Bristol, as a safe place, and permitted the town to choose a Mayor, after the manner of London, and with him were chosen "two grave, sad, and worshipful men," there being neither Sheriff nor Bailiff. It was said that the burgesses had leave given them to choose a Mayor annually, but no original charter for the election of Mayor has been found or quoted.

By a charter of this king (A.D. 1247), the Burgesses of Redcliff, then a separate borough, were made accountable to the same Justices as the inhabitants of Bristol. For the confirmation of their charters and the renewal of their liberties, including the right to choose their own Mayor (as in London), and present him to the Constable of Bristol Castle, the burgesses paid to Edward I. (A.D. 1300), who held the castle, town, and barton, a fine of 300 marks. There were several grants in this and succeeding reigns, of customs on imports for repairing the walls and the castle, paving the town, and repairing the quay.

As a further step towards local government, this king, in 1331, delivered to the Mayor, Bailiff, Burgesses, and other reputable men of Bristol, the custody of the

town and barton, and parts outside the walls of the castle, for five years, at an annual rent of £240.

In this reign, Stephen Spicer, who was Mayor in 1343 and 1344, formed, for helping and accelerating public business, a council of forty-eight of the principal men of the town, who were to meet at the Guildhall, when summoned by the Mayor, and there proceed to business.

The first mention of the office of an Alderman occurs in a byelaw, 20th Edward III., which provides that the Mayor shall annually summon before him all the weavers, who shall, upon their oath, elect four aldermen to supervise all that craft; the alderman was to possess a house of his own and a revenue, and that none should be chosen Mayor unless he had been first an alderman. The aldermen did not necessarily form a part of the Common Council, as the forty-eight selected men might without impropriety be called; this body was evidently the model on which the Common Council of forty was established by charter, twenty years later.

In this reign (Edward III.) the most important charter, perhaps ever accorded to Bristol, was granted, under date 8th of August, 1373, constituting it a county in itself, a dignity still possessed by the city, and one enjoyed by few other towns in the kingdom. This grant also gave power for the return of two representatives to Parliament, and for the Mayor and Sheriff to elect successively, from time to time, "forty of the better and more honest men" of the town as a Council to rate and levy taxes, &c. The consideration money paid to the king for this charter was 600 marks.

Consequent upon Bristol being made a county of itself, the Sheriff was directed to hold his County Court, and the Mayor was to continue to hold his court as

before; also the court of the king's steward, called the Tolzey Court, was to be held as heretofore, and the profits likewise were to be accounted for to the Crown.

Richard II. (1396) confirmed all the former grants, and directed that the steward, marshall, and clerk of the king's household should not sit in the City of Bristol.

By a charter of Henry VI., the town of Bristol, with its gates, ditches, walls, and other appurtenances, including the flesh market, was farmed to the Mayor and Burgesses for sixty years, at the annual rent of £102 15s. 6d. to the king, and £57 4s. 6d. to the Abbot of Tewkesbury and others.

In the reign of Edward IV. (1568) this sum of £160 was granted to his Queen Consort Elizabeth, to be paid as before, in two equal parts. The customs payable in this reign from the Port of Bristol were assessed at £400. In the first year of this reign the profits of the town, which hitherto had belonged to the Crown, were granted to the mayor and commonalty, and their successors for ever (with the exception of extents of lands) at the yearly total rent of £160. Of this sum, £60 was released in the following reign (Richard III.,) in consideration of the great losses the town and merchants had recently sustained; and the remainder was redeemed in the time of Charles I.

By a charter of Henry VII. (A.D. 1499), six aldermen were created, of whom the Recorder was to be one, and the remaining five to be nominated and chosen by the Mayor and Common Council; these aldermen were to have the like power, authority, and jurisdiction as the Aldermen of London; both the mayor and aldermen were to be Justices of the Peace. A chamberlain was likewise to be appointed to receive the city rents, and to

keep the charters, evidences, bonds, and muniments; the appointment of bailiffs, two in number, was confirmed, who were to be sheriffs of the county as well as bailiffs of the town; also to hold the County Court, and to receive all mandates, writs, and warrants from the royal courts. Two treasurers were to be chosen, and the Corporation was to include forty Common Councilmen, as before ordained. In the thirty-fourth year of the reign of Henry VIII., Bristol was further honoured by being made a cathedral city.

In the year 1581, being the twenty-third year of the reign of Queen Elizabeth, the City of Bristol was divided into twelve wards, and empowered to choose twelve aldermen, of whom the Recorder was to be senior, and he was to be well skilled in the laws of the land, and a barrister of not less than five years standing.

The citizens were directed to choose thirty Common Councilmen, out of whom two sheriffs were to be elected annually on the 15th of September, and sworn into office, with the Mayor, in public before the commons of the city, on the 29th of that month.

The whole Common Council was to consist of forty-two of the better and more discreet citizens, besides the mayor for the time being; the Recorder, who was senior alderman, was included in that number; they were to assemble annually, before each 15th of September, and the majority, by their votes, to choose and fill up any vacancy, so as to make up the number of forty-two members complete, besides the mayor, but including the twelve aldermen; and they were to make such reasonable laws in writing as might be good, profitable, necessary, and honest, for the good government of the city. In the year 1629, the Castle of Bristol was

separated from the County of Gloucester, and incorporated with the City of Bristol by Charles I., at the request of the queen, Henrietta Maria; for this charter the Crown received £959 from the mayor, burgesses, and commonalty, and an annual rent of £40. The office of High Steward was entirely honorary, and the election was by the Common Council for life; it was always filled by some nobleman or person of distinction.

In the reign of Charles II. (1683), in consequence of irregularities in the proceedings of the Mayor, Aldermen, and Common Council of the City of Bristol, a *quo warranto* was issued by the Attorney-General against the Corporation, and the charter was required to be resigned into the hands of the king, which was accordingly done, on the 9th of November, in the 35th year of this reign; and on the 2nd of June of the following year, 1684 (the 36th of Charles II.), a fresh charter was granted, constituting the said City of Bristol, for the future, a city incorporated and county by itself, terminated and limited by the boundaries which had existed for the previous twenty years; the Common Council to consist of forty-two persons, besides the mayor of the said city for the time being, twelve of that number being aldermen, the mayor and aldermen to fill up any vacant aldermanship from the Common Council, and the Common Council to fill up vacancies in their numbers from the Burgesses.

This charter, with some additional privileges, was confirmed by another, which was granted in the ninth year of the reign of Queen Anne, on the 24th of July, 1710. The Mayor, Recorder, and Aldermen were by this charter confirmed in their position as Justices of

the Peace for the City and County of Bristol, and for the purpose of gaol delivery within the same, four times in every year.

The boundaries of the city within its ancient limits comprised 755 acres; and the added districts, by the Municipal Act, 5th and 6th, William IV., contained 4124 acres, or a total of 4879 acres. The population of the ancient city, and of these districts for this century, are as follows:—

	1801	1811	1821	1831	1841
Ancient City	40,814	46,592	52,889	59,074	64,266
Added Districts	20,339	24,891	32,219	45,334	60,880
	<u>61,153</u>	<u>71,483</u>	<u>85,108</u>	<u>104,408</u>	<u>125,146</u>
	1851	1861	1871		
Ancient City	65,716	66,027	62,662		
Added Districts	71,612	88,066	119,890		
	<u>137,328</u>	<u>154,093</u>	<u>182,552</u>		

The rateable value has greatly increased, as may be seen by the following:—

Rateable Value	1841	1861	1871
Ancient City	£212,318	£237,168	£301,214
Added Districts	193,888	271,820	418,769
	<u>£406,206</u>	<u>£508,988</u>	<u>£719,983</u>
Total			

In the fifth and sixth years of the reign of William IV. (1835), the Municipal Corporations' Reform Act was passed, which abolished the principal existing Municipal Corporations in England and Wales, except that of the City of London, and enacted that on the 1st of November in every year, those inhabitants whose names had

been placed on a published list called the Burgess Roll, should be entitled to elect from themselves, a certain number of persons to constitute a corporate body, to be called the Town Council, who were to continue in office for three years; one-third of the whole number to go out of office on the 1st of November in each year, but who were eligible for re-election. The Town Council, on the 9th of November in every year, were to elect one of their body to be Mayor for the ensuing year; also, every third year, on the same day, to choose a certain number, being a third of the elected Councillors, as Aldermen, who were to continue in office six years, a half being elected every three years; the Aldermen might be selected from the Councillors or from the Burgesses; the vacancy created by an election of a Councillor to be filled by the Burgesses of the Ward to which the Councillor belonged; the united body constituted the Town Council for the City or Borough. The Council also elected a gentleman to fill the office of High Sheriff, who might be either a member of the Council or a person outside that body, whose duties consisted in receiving the Judges on Circuit; and he was also the returning officer for the city, of Members of Parliament, and executed, by his officers, certain writs and processes of law.

By this Act (5th and 6th William IV.), the City of Bristol was extended, to include within its boundaries the adjoining parish of Clifton, the Out-Parishes of St. James and St. Paul, and St. Philip and Jacob, with parts of the parishes of Bedminster and Westbury-on-Trym, by which the area included in the city was increased to 4879 acres, with a circuit of about 15 miles. It was divided for municipal purposes into *ten* Wards; two of

them returning nine members each to the Council; to two more, six members were assigned, and the remaining six Wards elected three members each; the Town Council being thus constituted of 48 members elected by the Burgesses, with 16 Aldermen, chosen by the Council, which made up the total number of 64 members.

The magistracy of the city is administered by about 30 acting Justices of the Peace, who are appointed by the Lord Chancellor from time to time, on the recommendation of persons locally connected. The Mayor for the time being is the Chief Magistrate; they are assisted in their duties by a chief clerk and two assistants. In the Commission of Assize for gaol delivery, the Mayor is included in the Commission for the City with the judges on circuit.

In the year 1806 (the 46th of George III.) an Act was passed conferring the power of constructing and maintaining the sewers, paving, cleansing and lighting the ancient city of Bristol, upon 38 Commissioners; 10 burgesses being selected by each of the 18 parishes and the ward of Castle Precincts, out of whom the Justices elected two Commissioners from each parish or ward. This body had power to make rates for the purposes of the Act, which were to be certified by the Justices,—and being directed by precept to the Incorporation of the Poor, were collected by them with the Poor Rates, and the amount paid over to the Commissioners. This was the authority that continued to act as a Highway Board for the ancient city of 19 parishes until the adoption by the Town Council, in the year 1851, of the Health of Towns Act, which entirely superseded the Commissioners' powers; as it did also those of the

Highway Boards of the parishes of Clifton, St. Philip and Jacob (Out), and the parts of Bedminster and Westbury within the municipal area; also similar powers exercised by the Commissioners for the District of St. James and St. Paul; and the Council took on itself, under this Act, the management of all the streets and roads within the municipal area, with the exception of those which were then under the Commissioners for Turnpike Roads, which have been since included.

By the Town Council adopting, in 1851, the Health of Towns Act, they became a Board of Health or Sanitary Authority, and by that and subsequent statutes they had vested in them the powers relating to the construction, maintenance, lighting and cleansing the streets, and the construction and maintenance of sewers: also the powers of a Nuisance Authority, for the prevention or abatement of nuisances within the city, the proper supply of water, and generally as to all matters relating to the health of the inhabitants. They deputed the carrying out these powers to a committee of their body, subject to confirmation by the Council.

The Town Council having also, in the year 1865, adopted the Local Government Act of 1858, a committee were chosen to exercise the powers conferred by the several Acts of Parliament for the improvement of old, and the construction of new streets and roads, all their proceedings being subject to the confirmation of the Town Council at their meetings: the powers to take property, otherwise than by agreement, being obtained by special Acts of Parliament.

The various other committees of the Town Council have their special duties assigned them. The principal

are known as the Finance, the Watch, the Bye Laws, the City Library, the Baths and Washhouses, the Parliamentary Bills, the Visitors of the Lunatic Asylum, the Cattle Market, and the Docks' Committees.

The ordinary expenses for Sanitary purposes, as well as the sums required to repay by annual instalments the monies, with interest, borrowed by the Authority for streets' improvements, and for the exercise of the various powers conferred by Acts of Parliament as a Board of Health, are defrayed by rates levied by the Town Council as a Sanitary Authority, twice in each year, which amounted in the year 1874 to about £81,000, in addition to other minor sources of revenue. The whole of the area of the city has also been divided into six Sewer Districts, on each of which a separate annual rate is assessed, to pay off annually a twentieth or thirtieth part of the money borrowed for the construction of the main sewer of the district, with interest thereon. The amount of these rates is nearly £10,000 a year at the present time.

The income and expenditure of the Town Council itself is managed by the Finance Committee. The income is principally from rents of city properties, tolls of markets, dues on shipping, fines in Police Courts, payments from Government towards police expenses, and interest on monies in consols, the deficiency being made up by a borough rate, which is apportioned and assessed by the Council on the several districts, and is collected by the Incorporation of the Poor, and the overseers of the five parishes or districts of the enlarged city boundaries, and paid over by them to the City Treasurer. The gross sum raised by Borough Rate varies considerably, being from £4,155 to £30,148 per

annum : the average for the last twenty-seven years was £21,820.

The Docks, which were originally constructed out of the rivers Avon and Frome by a private company of citizens under an Act of Parliament passed in the year 1803, were transferred to the city by the Docks' Act, obtained in the year 1848, and then became the property of the citizens, together with all their liabilities. They have since been managed by a committee of the Town Council, called the Docks Committee. The income is principally derived from tonnage rates and rates on imported goods, and from rates levied on the city; the latter by the last statement was £11,360. Under their management the income of the Dock Estate has largely increased : it amounted, in addition to the sum received from rates, in the year ending the 30th of April last, to about £49,000.

While the city within its ancient limits was governed by its Common Council under its charters, and as subsequently enlarged in 1835, by its responsible Municipal Council, there was another Incorporated body, which acted under its powers for the care, maintenance, and employment of destitute persons within the ancient limits, or 19 parishes.

The first legislative provisions for an assessment upon real property for the maintenance of the poor were made by the Act of the 14th of Elizabeth, cap. 5. By this Act, and the statute of the 43rd of that reign, the churchwardens and overseers of every parish were to raise by taxation of every inhabitant, either weekly or otherwise, sufficient for the relief and employment of the poor, and the placing out of apprentices.

In the year 1696 (the 7th and 8th of William III).

the nineteen parishes or places comprised in the limits of the city of Bristol were incorporated for the purposes of caring for the poor, and for assessing and levying rates to form a common fund for their relief and employment, and for the erection or purchase of a workhouse or hospital out of the same, large enough for the poor who are to be employed therein, and also room for the accommodation of those who are unable to work. By this Act the whole of the existing city became like one parish for the purposes of the poor, and one law officer did the business, where 19 were formerly employed, and the saving in expense was considerable, besides the inconvenience occasioned the poor in being removed from one parish to another, on account of their various settlements. The church-wardens and overseers still continued to collect the rates when apportioned by the Justices to each parish, and these sums were paid into a common fund which was under the control of the Incorporation of the Poor. In the year 1798 the building adjoining St. Peter's Church, which had been used as a Mint for coining for a short time, was purchased for a Poorhouse by the Incorporation for £800—part of the sum being given by some citizens: and subsequently an additional building was purchased.

The constitution of this Corporation in 1696 was by the election of four ratepayers from each of the twelve aldermanic wards, and these 48 elected persons were called Guardians of the Poor, who were chosen for four years, half of their number to go out of office every second year. The Mayor for the time being, and the twelve Aldermen were also members of the court, together with any honorary Guardians, who might be

ected by the court from those who had given contributions of £100 or upwards to the Poor Fund. A subsequent Act (1714) increased the number, by constituting the two churchwardens of each parish, members of the court; but in 1718 this was repealed so far as related to junior churchwardens, and only the senior was retained: honorary guardianship was also discontinued in the beginning of the present century. The present constitution of the court consists of the Mayor for the time being, twelve members of the Town Council elected annually, forty-eight elected Guardians, the eighteen senior churchwardens, and the senior overseer of the Castle Precincts, the Incorporation being thus composed of eighty members, except when some of the members are chosen in more than one capacity, which is frequently done. This body is the Board of Guardians of the Poor for the nineteen parishes, and by Vict. I., cap. 86, exercise the power of overseers within those limits, and levy and collect all the local rates of the district, except the Board of Health or Sanitary rates. The rates are assessed half yearly, and consist of the Poor Rate, the Harbour Rate, and the Borough Rate (if required), and once in each year the Borough Dock Rate; and before the year 1851, the Pitching, Paving, and Lighting Rate.

The amount of the rate levied for the Poor by the churchwardens in 1696 (the year before the Incorporation Act) was £2,154, and in the following year (1697) it was £2,316. It gradually increased, and in 1822 was about £25,000, and at the present time is about £36,000, in addition to the other rates collected and paid over to other authorities.

For the purposes of Poor Law management, the city

of Bristol is under three distinct authorities:—The Incorporation of the Poor, for the ancient city, mentioned above; the Clifton Union, for the parishes of Clifton, St. Philip and Jacob (Out), the District of St. James and St. Paul, and the parish of Westbury; and the Bedminster Union for the parish of Bedminster. The total amount of the local rates for the five outlying parishes or parts of parishes, within the municipal area for the year 1874, *not* including the Sanitary and Sewers' Rates, was about £52,818, or an average of 2s. 4½d. in the pound upon the rateable value of £446,940.

The following statement will show the amount of local taxation for one year (1874) of the city of Bristol.

Rateable value for Poor Law Purposes, £759,441.

			£	s.	d.	£	s.	d.
Poor Rate	about	1s. 9d. in £	66,451	1	9			
Borough Rate	„	os. 7½d. „	23,732	10	7			
Borough Dock Rate,	„	os. 3¼d. „	10,284	1	11			
Harbour Rate about,	„	os. 0¾d. „	2,373	5	0			
			<hr/>					
		2s. 8½d. in £	102,840	19	3			
Less for void and irrecoverable								
say 6 per cent.	...	...	6,170	8	0			
			<hr/>					
						96,670	11	3

Rateable value for Sanitary purposes,

£739,045.

Paving, Pitching, Steining, Cleans- ing, Repairing Sewers, Salaries, Rents, Hospital Expenses, Collec- tors' Poundage, Gas Act expenses	} about 1s. 3½d. in £	47,729	19	9					
Carried Forward	-	-	-	47,729	19	9	96,670	11	3

	£	s.	d.	£	s.	d.
Brought Forward - - -	47,729	19	9	96,670	11	3
Lighting City about os. 5d. in £	15,396	15	5			
Streets' Watering „ os. 1½d. „	3,849	3	10			
Street's Improve- ment, repayment } „ os. 6½d. „	19,245	19	3			
of ⅜ of principal)						
	2s. 4d. in £	86,221	18	3		
Less, for void and irrecoverable, say 6 per cent.	5,173	6	2			
				81,048	12	1

Six Sewer Districts, Rateable Value,

£739,045.

Constructing Six Main Sewers, to repay ⅞ or ⅜ annual repayment of principal with interest, 3d. 4d., and 5d. in £ ...	about 4d. in the £	12,317	8	4
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Less for Existing Sewers, and
void and irrecoverable, say 20
per cent.

2,463 9 8
9,853 18 8

Local Taxation, Average Total for 1874 ...	5s. 4½d. in £	{ Amount of Local Taxation paid in 1874, not including Dues paid by Ship- ping	187,573	2	0
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Indebtedness of Sanitary Authority, March 1875.

	Sums originally Principal Money borrowed.			Sums owing March repaid. 1875.		
For	£	£	s. d.	£	s. d.	
Sewer Works ...	156,500	93,908	6 8	62,591	13 4	
Streets' Improvement	316,570	52,345	0 0	264,225	0 0	
Purchase of Stables...	1,500	100	0 0	1,400	0 0	
	<u>474,570</u>	<u>146,353</u>	<u>6 8</u>	<u>328,216</u>	<u>13 4</u>	



BRISTOL AND ITS ENVIRONS.

SECTION V.

Educational Organizations.

THE GRAMMAR SCHOOL.



HE oldest and most important of the public schools of this place is the Grammar School, which is a classical school of the first grade with a modern department. The people of Bristol are indebted for this foundation to the family of Thorne. By a will, dated May 17th, 1532, Robert Thorne devised £1000 to be distributed, and ordered as to his executors should seem best for his soul. A deed poll of Nicholas Thorne, dated July 1st, 1561, after reciting the "laudable purposes" of these executors in the foundation of a Free School of Grammar in the City of Bristol, declares that certain lands and property are given to the Mayor, Burgesses, and Commonalty of the City of Bristol and their successors for ever, for the purpose of

founding a free Grammar School "within the house called the Bartilmews," with a master and ushers, "to teach grammar within the said school to all children and others that would repair to the said school for learning and knowledge of the Latin tongue, and other good learning, and for the better education and bringing up of youth in knowledge and virtue." The school so founded stood on the site of the Hospital of St. Bartholomew, at the bottom of St. Michael's Hill. About the year 1769 the school was transferred to its present site in Unity Street, the hospital school, founded by John Carr, under the name of Queen Elizabeth's Hospital, exchanging premises with it. The school has long outgrown the capacity of the buildings in Unity Street, and that site has ceased to be convenient for those whom a first grade school is designed to serve. By the scheme of the Endowed Schools Commissioners, which became law on May 13th, 1875, the school will be removed, as soon as possible, to a convenient site at the top of the hill, adjoining the suburbs of Clifton, Redland and Cotham, and new buildings will be erected for it, better suited than those at present in use for the chief public school of Bristol.

The Grammar School continued under the management of the Mayor and Corporation till the year 1842, when it was handed over to the Municipal Charities Trustees. At this time the school had fallen into decay, and the then head master, though still living in the master's house, had for some years received no pupils. In 1848, the school was re-opened, by the Trustees, under the Head Mastership of the late Dr. Evans, formerly Fellow of Jesus College, Oxford.

From that time it has continued to flourish. At present there are upwards of 300 pupils in attendance, and the honour boards which cover the walls of the great schoolroom are filled with lists of distinctions won by its pupils past and present at Oxford and Cambridge, and in competitive examinations of all kinds. The management of the school is transferred by the last scheme to a new governing body, consisting of the Charity Trustees, and of six gentlemen elected by certain constituent bodies in the place.

The school has four Scholarships of £50 a year, each tenable for four years at some English University; two Scholarships of £100 a year each, tenable for five years at St. John's College, Oxford; a Scholarship of £50, tenable for one year at some public school or college on the Continent, for the benefit of those boys intended for commercial pursuits; and one Scholarship of about £20 a year for boys engaged in certain professions. Besides these, the new scheme directs the formation of from ten to fifteen Scholarships to be held in the school itself.

The present Head Master is the Rev. J. W. Caldicott, D.D., formerly Tutor of Jesus College, and some time Public Examiner in Classics in the University of Oxford; the Second Master is the Rev. T. W. Openshaw, M.A., formerly Scholar of Brasenose College, Oxford. The Assistant Masters are:—Rev. H. Frewer, M.A., Jesus College, Oxford; A. Weekes, Esq., M.A., formerly Scholar of Sidney Sussex College, Cambridge; Rev. V. P. Wyatt, M.A., formerly Scholar of Queen's College, Cambridge; F. Main, Esq., M.A., Pembroke College, Oxford; J. G. S. Muschamp, Esq., B.A., formerly Scholar of St. Peter's College, Cambridge;

C. L. G. Morgan, Esq., B.A., late Exhibitioner of Worcester College, Oxford; G. Peake, Esq., Caius College, Cambridge; W. Howell, Esq.; Mons. G. de Grailly Evans; Herr Just; J. Nicol Smith, Esq.; and J. Phillips, Esq.

THE HOSPITAL SCHOOLS.

There are three great Hospital Schools in Bristol, two of which have been under the management of the Municipal Charity Trustees, and one has been governed by the Merchant Venturers. The schools under the management of the Charity Trustees are Queen Elizabeth's Hospital for boys, and the Red Maids' School for girls; the Merchant Venturers have governed Colston's Hospital.

Queen Elizabeth's Hospital was founded by the will of John Carr, the probate of which is dated April 10th, 1586. This will devises certain property for the purpose of providing an "hospital or place for bringing up of poor children and orphans, being men children," such as shall be born in certain places named, "and whose parents are deceased, or fallen into decay, and not able to relieve them." The will directs that the hospital shall be conducted after the manner of Christ's Hospital in London, and makes the Mayor and Commonalty of Bristol "patrons, guiders, and governors of the said hospital for ever." The school was accordingly formed "in the mansion house of the late hospital, or house of Billesweeke, otherwise called the Gaunts." From that site it was removed by exchange, about the year 1769, to the house of St. Bartholomew's, at that time occupied by the Grammar School. In 1847, the school, having come under the management of the Charity Trustees,

was again removed to the fine building which it occupies at present on Brandon Hill. In that school about 220 boys have been usually boarded, clothed, and educated. A new scheme for the government of this school and of the Red Maids' School received the approval of Her Majesty in Council on May 13th, 1875. By this scheme the object of both these schools is declared to be "to supply a sound, practical, and liberal education, not being merely elementary, for boys and girls, by means of schools in or near Bristol." The governors are to be the same as the Governors of the Grammar School, with the addition, in the case of the Red Maids' School, of four women, to be appointed by the Governors of the Grammar School.

Queen Elizabeth's Hospital is, by the scheme, to be developed into three schools, viz:—Queen Elizabeth's Hospital for boys, which is to be a boarding school; Queen Elizabeth's Day School for boys; and Carr's Day School for boys. In Queen Elizabeth's Hospital in future there are to be not more than 160 boys maintained and educated as foundation boarders. Of these, 50 are to be poor orphans who have lost one or both parents, or boys whose parents, from mental or physical incapacity, are unable to maintain or educate them, such boys having been born or resident for three years in certain localities, and being between the age of eight and ten; 50 are to have attended, for at least one year, some public elementary school in Bristol, to be between the age of ten and twelve, and to have been born or resident for three years within the boundaries of the Borough of Bristol; the remaining 50 are to have attended, at least one year, Queen Elizabeth's Day School, or Carr's Day School, subject to the same limitations of age and place

of birth or residence as in the case of the second fifty. The subjects of instruction are to be the ordinary subjects of a second grade school.

No definite regulations are laid down in the scheme for the two day schools of the foundation ; but it would appear, from the scale of fees, that one of them is intended to be of the second, and one of the third, grade.

The present Head Master of Queen Elizabeth's Hospital is Mr. Thomas Cayzer, who is assisted by seven assistant masters.

The Red Maids' School.—Alderman Whitson, by a will of the date of March 27th, 1627, gave certain property to the Mayor, Burgesses, and Commonalty of Bristol, to provide for 40 poor women children, daughters of Freemen or Burgesses, dead or decayed in estate. These women children, under the care of some woman, were to be taught to read English, to sew, and to do other laudable work towards their maintenance. The Mayoress, or the "ancientest Alderman's wife," was to appoint the work to be done by them ; and the school was to be carried on in some convenient room in the new mansion house of the Gaunts', in Queen Elizabeth's Hospital. The school is at present situate in Denmark Street, in buildings erected in 1840 on a part of the site of the house of the Gaunts. It has been under the government of the Charity Trustees, and has provided boarding, clothing, and a plain education suited for girls intended for domestic service, or for women's trades, for about 120 girls.

By the new scheme (for the government of this school and of Queen Elizabeth's Hospital) the school is to be under the management of the Governors of the

Grammar School, together with four women, to be appointed by the said Governors.

The school is to be a boarding school for not more than 80 girls, and it is to be removed from its present site. A new day school is to be formed for girls on the present site in Denmark Street, for as many as can be there accommodated; and, in course of time, another day school is to be founded in some other part of the city.

In the Red Maids' School proper, 50 girls, of the 80 foundationers, are to be orphans, or girls whose parents, from mental or physical incapacity, are unable to maintain or educate them; are also to have been born, or resident for three years, within the boundaries of the borough, and to be between eight and ten years of age. Fifteen are to have attended, for at least one year, some public elementary school in Bristol, to be between the age of ten and twelve, and to have been born, or resident for three years, within the borough boundaries; and the remaining fifteen are to have attended, for at least one year, one of the proposed day schools of the foundation, subject to the same limitations of age, and place of birth and residence, as in the case of the second fifteen.

The subjects of instruction in the Red Maids' School are to be similar to those in Queen Elizabeth's Hospital, with the addition of Domestic Economy, the Laws of Health, Needlework, and (if the Governors shall so think fit) Telegraphy, or some other skilled industry fit for women.

The Mistress of the School is Miss E. H. Browne, who is assisted by a staff of four Assistant Mistresses, and a Singing Master.

THE SCHOOL BOARD.

In the autumn following the passing of the Elementary Education Act of 1870, a resolution for the formation of a School Board in Bristol, proposed by Mr. W. K. Wait, was unanimously passed by the Town Council. The Board was elected, after a spirited contest, on January 27th, 1871, and, at its first meeting, chose Mr. Lewis Fry and Mr. M. Whitwill for its Chairman and Vice-Chairman. As soon as the necessary preliminaries were arranged, an educational census was taken, by means of a visitation from house to house throughout the district of the Board. From this census—which occupied the time of about forty clerks and officers for a month—it was found that there were then in Bristol 7712 children between the age of three and five, and 26,916 between the age of five and thirteen years. For the elementary instruction of these children, there was already provided accommodation for 23,337 children, viz:—for 19,729 in inspected, and for 3608 in private and uninspected schools. Of the children returned in the census 7574 were attending schools of a higher kind, or were instructed at home. It was calculated that about 500 children, who should have been included in the returns, had been omitted from one cause or another. It appeared, therefore, that fresh accommodation was required to be provided for 4217 children. In the census was included a return of attendance of children in the then existing schools, from which it appeared that 5318 children were confessedly without teaching of any kind; and this number, great as it is, was found, on further inquiry, to fall very far short of the truth. Very nearly 4000 were returned in the census, by their parents, as attending school, about whom nothing

was known at the respective schools, or who had left school long before.

Simultaneously with the prosecution of these inquiries, the Board had been engaged in drawing up Bye-Laws for enforcing the attendance of children at school, in regulating the subjects of education in its projected schools, in determining the question of payment of fees for those children whose parents should be found unable, from poverty, to make the payment for themselves, and in dividing Bristol into four districts for educational purposes. Each of these districts is put under the charge of two officers, whose work is overlooked and controlled by four standing Committees of the Board.

During this time, additional school accommodation was being rapidly provided by voluntary bodies, and Her Majesty's Inspectors had been visiting the existing schools, and had been examining into their efficiency. After conferences with these gentlemen, the Board reported to the Educational Department on May 10th, 1872, that, while in three of the school divisions, viz.: the District with St. James and St. Paul's, Redcliff and Bedminster, St. Augustine's with Clifton and St. Michael's, no additional accommodation was required, it was necessary for them to provide in the fourth division, that of St. Philip and St. Jacob, new schools for 1500 children.

The Bye-Laws of the Board received the sanction of Her Majesty in Council, on November 3rd, 1871; and from that time both the first-elected and the present Board have been actively engaged in their educational work. The Board has received, by transfer, six schools, has established an Industrial School for Girls, and

assisted, for some time, in carrying on a Day Industrial School. A new school for 190 boys, 192 girls, and 252 infants, has been built in Freestone Road, St. Philip's, and was opened last August. Another school, for 250 boys, 250 girls, and 250 infants, has been built on Barton Hill, and will be opened after the Midsummer holidays. A third school, for 450 boys, girls, and infants, is in course of erection at Ashton Gate, Bedminster; the site for a fourth school, for about 500 children, has been secured in the Hotwells, Clifton, and a fifth school, for 150 infants, is to be built in the neighbourhood of Woolcot Park. By the last return of the Board, 26,148 children are on the registers of efficient schools, of whom 18,744 made in the last month the whole number of attendances. Besides these, some 4000 are said to be on the books of private adventure schools, so that nearly the whole of the child population of Bristol, of school age, may be considered as on the books of some school, efficient or non-efficient. The total charge upon the rates, incurred by the Board in carrying out their work, up to December 24th, 1874, is returned as £12,960 11s. 6d., being at the rate of 1d. in the £ for each year.

In January, 1874, the time for which the first Board was elected having expired, the following gentlemen were elected a new Board, viz:—Mr. Lewis Fry, Mr. Mark Whitwill, Mr. W. P. Baker, Mr. W. H. Budgett, Mr. R. Butterworth, Rev. J. W. Caldicott, D.D., Rev. Canon Clarke, Mr. T. Coomber, Rev. F. W. Gotch, L.L.D., Mr. A. Hall, Mr. H. F. Lawes, Rev. T. C. Price, M.A., Colonel Savile, Rev. U. R. Thomas, Rev. S. A. Walker, M.A. Of these, Mr. Fry, Mr. Whitwill, Mr. W. P. Baker, Mr. W. H. Budgett, the Rev. J. W.

Caldicott, D.D., the Rev. F. W. Gotch, L.L.D., and Mr. Lawes, were members of the first Board. The Clerk to the Board is Mr. B. Wilson. The meetings of the Board are held, and its business is transacted, in the Board Room, Guildhall Chambers, Small Street.

COLSTON'S HOSPITAL.

This school was founded and endowed in 1708 by Edward Colston, of the City of London, merchant, at the Great House in St. Augustine's Place, in the City of Bristol; its object being "to educate in the principles of the Church of England, and to maintain and clothe 100 poor boys, and to place them out apprentice." It was necessary that boys should be either sons of Freemen, or born within the City of Bristol, with the exception of one-fifth of the total number, who might be chosen from any other place; but from eight to ten of the "town" boys were always to be from Temple Parish, "that being the place of the Founder's nativity." The "settlements" also directed that "any boys of kin to the Founder, or bearing the name of Colston, should have a right to be preferred before any others." No boy could be admitted before the age of seven years, nor after ten years, nor could he remain in the school longer than seven years. By the Founder's directions, the Society of Merchant Venturers were constituted sole managers of the estates of the charity, and Governors of the Hospital; and twelve gentlemen, chosen by Mr. Colston himself (with power to fill up any vacancies afterwards occurring in their body), were called his "Nominees," and were by him appointed visitors. In the event of certain contingencies, defined in the settle-

ments, the Governors of Christ's Hospital, London, were empowered to discharge the functions of either or both of the above bodies. All vacancies in the school were filled up in moieties by these two bodies; the Nominees including in their half all the "country" boys. Further regulations for the management and government of "his Hospital" were made by Mr. Colston, in 1712, 1715, and finally in 1718.

For more than 150 years the affairs of the Hospital continued to be ably and faithfully administered by the Trustees and Nominees. In 1858, owing to the improved value of the property of the charity and its judicious management, the Trustees considered that they were in a position to add 20 boys to the foundation. But the "Great House" in St. Augustine's Place not affording sufficient accommodation, and the surrounding buildings and factories precluding the possibility of its enlargement, it became a question whether the school should be removed. As, however, great difference of opinion prevailed upon the subject, as well in the city as among the Trustees themselves, the matter was brought before the Master of the Rolls, who eventually approved of the proposal. The Trustees, thereupon, purchased the former palace of the Bishop of Gloucester and Bristol; and a new wing having been added to the building, the school was formally removed in 1861, to its present locality at Stapleton, where, with its grounds and a bathing-place at the river, it occupies a space of about seven acres.

In 1869, with a view of improving and extending the education at the Hospital, the Trustees and Nominees drew up a scheme, embodying some suggestions of the late Canon Moseley, and giving a prominent place to

the Natural Sciences. For special reasons, however, the carrying out of this valuable scheme was postponed.

In the early part of the present year the new scheme of the Endowed Schools Commissioners came into force, having received the Royal Assent on the 4th of February. But the Governors are to be congratulated upon the prosperous issue of their protracted struggle with the Commissioners; and the warmest thanks of the citizens of Bristol are due to them for their persistent and finally successful efforts to retain, and secure to the city, the full benefits of Mr. Colston's original endowments. The scheme is based upon, and embraces all the essential and distinctive features of Colston's settlements. The Hospital is to continue as a Boarding School. Its object is "to supply a sound, practical, and liberal education, not being merely elementary, in accordance with the principles of the Church of England." The management of the Trust is still left in the hands of the Society of Merchant Venturers; but a new governing body is appointed for the schools, consisting of 23 members, viz., the Bishop of the Diocese and the Rector of Stapleton, *ex-officio*: 13 from the Society of Merchant Venturers: 2 appointed by the Magistrates of Gloucester and Somerset: 3 by the School Board for Bristol: and 3 co-optative.

The school in future will comprise two elements. (1). —*Foundationers*, of whom 80 will be chosen from within the Parliamentary Borough of Bristol, and 20 from the Counties of Gloucester, Somerset, and Wilts. They must have attended an elementary school, regularly, for a year preceding their application. They will be elected in order of merit, as tested by a *Competitive* Examination in the subjects of Standard 4 (Code 1875), for boys

between 10 and 11 years of age; and in those of Standard 5, for boys between 11 and 12 years of age; they must also satisfy the Examiner of their knowledge of the Church Catechism. Foundationers receive board and tuition gratuitously, and, if necessary, an allowance towards clothing. (2).—*Paying Scholars*. The number of these is limited only by the extent of the accommodation; but if necessary, the Governors are empowered to enlarge the building. These boys pass an *Entrance Examination*, one Standard lower for corresponding ages than that fixed for Foundationers, and enjoy all the advantages of the school upon payment of about £30 per annum, paid quarterly, in advance. No boy can be admitted into the school under 10, or over 12 years of age; nor can any boy remain beyond the school term, in which he attains the age of fifteen years.

By direction of the Scheme the Governors "will apply a sum of not less than £100 per annum in maintaining exhibitions, to be competed for by boys who have attended the Boarding School for not less than two years immediately preceding the award thereof, tenable at any Grammar School, or other place of liberal or professional education, approved by the Governors."

The Subjects of Instruction in the Hospital are—Reading and Spelling; Writing (plain and ornamental); Arithmetic and Book-keeping; Mensuration, Mathematics; English Grammar and Analysis; Composition and Literature; French and Latin; History; Geography (political and physical); Natural Science; Navigation; Drawing; Vocal Music; and such other subjects as the Governors may think fit to add.

The Hospital has, for many years, more than fulfilled the intentions of its founder; and, during the last few

years, has considerably increased the extent and character of its work. From 1858 to 1872, candidates were sent up to the Cambridge Local Examinations, gaining 56 passes, 14 of which were honors, besides many "distinguished" marks. In the last of these years, its seven candidates all passed in honors, one Senior and one Junior taking first places. From 1872 to the present time the school has sent up candidates to the Government Examinations in Science and Art, the results of which have been highly satisfactory, many boys passing in five subjects.

The present Head Master is John Hancock, Esq., Associate of King's College, London, and of the University of Dublin. He is assisted by five resident Assistant Masters (including a resident French Master), and one Visiting Master for Music and Singing; there is also a resident Drill and Band Master.

Under the New Scheme, the management of the Bristol Diocesan Trade School has been transferred to the Governors of the Hospital, and will receive a liberal measure of success from its funds. The Governors are also directed to establish a Day School for Girls, within three years of the date of the scheme.

The preamble to the New Scheme bears testimony to the lively interest exhibited by the Society of Merchant Venturers for the future welfare of the schools. For it states that not only have the Society agreed "to release certain mortgages and other debts due to them by the Hospital," but also "to further contribute towards its endowment such a sum in cash, as, together with the amount of the debts, will make up a total of £10,000." An act of munificence, so princely and Colston-like, is above comment.

BRISTOL TRADE SCHOOL.

The object of this School is to provide an education in the Applied Sciences.

It was established in 1856, at the suggestion of the late Canon Moseley, himself a distinguished man of science.

The general studies of the school are Mathematics, Descriptive Geometry, Machine Drawing, Building Construction, Theoretical and Applied Mechanics, Chemistry, Experimental Physics, and Art Drawing.

But there is a department of Mining Engineering in which Geology, Mineralogy, Mining, Steam Surveying and Plotting are taught, in addition to the subjects above mentioned.

It has also been found necessary to establish a preparatory division of the school, the studies of which are introductory to those of the higher division.

There are now 189 scholars on the books of the school.

Evening classes for adults are also carried on during the winter months, in which the following subjects are studied:—Mathematics; Descriptive Geometry; Machine Drawing; Building Construction; Theoretical and Applied Mechanics; Inorganic and Organic Chemistry; Laboratory Practice, Experimental Physics, Steam, Botany; Freehand, Geometrical, and Model Drawing; French, German, and Latin.

These classes are attended by nearly 250 students.

The Government of the day held so high an opinion of the value of the work proposed to be done, that the then Lord President of the Council, Earl Granville, came to Bristol to inaugurate the school on the 28th of March, 1856, and, after the expiration of ten years, the

official estimate of the progress of the school, and the way in which its work had been done was marked by the visit of Earl Granville's successor in office, his Grace the Duke of Buckingham and Chandos, who came to Bristol on the 8th of January, 1867, for the purpose of distributing the prizes which the scholars of the Trade School had won in the examinations of the Department of Science and Art. In the report presented by his Grace to her Majesty in Council for the year 1866, the Trade School is thus referred to :—

“ That the Trade School of Bristol should, with its 120 pupils, carry off *four* out of the *eight* gold medals awarded, besides two silver and four bronze medals, and 97 prizes, redounds greatly to its credit, and places it decidedly at the head of the list of Science Schools.”

The direction of the school has been very recently transferred by the body of gentlemen who have managed it from its commencement to the Governors of the Colston Trust.

In their last report, that for 1874, these gentlemen make the following retrospect of the work that has been done under their management :—

“ The examinations of the Department of Science and Art were established in 1863. Since that time our scholars have earned the following distinctions in these examinations :—Ten gold medals, ten silver medals, and twenty-four bronze medals. Five students have in these examinations obtained Royal Scholarships of £50 per annum for three years, and free instruction in the Government Colleges of Science. The Department have recently established honours' examinations, which it is their expressed intention to make the severest to which a student has to submit. Six of our students

have placed themselves in the first class in these examinations, and four in the second class. Two of our students have won Science Scholarships at Oxford and Cambridge respectively, and have graduated with distinction. The Royal Scholars have carried away the highest distinctions the Government Colleges of Science had to offer, and one of them last year took the first place in the first class of Chemical Honours in the London University Examination for the degree of Bachelor of Science, and thus obtained an exhibition of £40 per annum for two years.

Turning to the introductions which the school has afforded to local and other industries, it will be seen that equal good has been done. Numbers of the scholars have been employed in local engineering works, and many of them are obviously destined to make good and useful careers.

Two of the former scholars are managers of important chemical works in Birmingham, two are chemists to works in London, one at King's Lynn, while no less than thirteen of the local factories have chemists who have received their chemical education at our school. We have also educated three students who are now engaged in teaching Science.

The work of the Mining Department has also been attended with very encouraging success. One or two of the students of Mining have turned their attention to other pursuits, but with these exceptions those who have studied in the school are all occupying more or less important positions in the management of mines.

As has already been said, the management of the school has recently passed into the hands of the Governors of the Colston Trust, and from the proved

ability of the greater number of these gentlemen in directing schools, and the most generous support which the Scheme allots to the Trade School from the Trust Fund, the best consequences with regard to the further development of the efficiency and scope of the school may be anticipated.

In the way of exhibitions the school at present only holds a Free Scholarship in the Royal School of Mines, but the Governors will now apply an annual sum of not less than £100 out of the income of the Charity in maintaining Exhibitions, to be competed for by boys who have attended the Trade School for not less than two years immediately preceding the award thereof, and to be tenable at any University, or any other place of liberal, technical, or professional education approved by the Governors; and, in addition, if any candidate of sufficient merit presents himself, the Governors shall elect him a Moseley Scholar, and assign him an exhibition of the value of £20 per annum, to be called the Moseley Scholarship, and to be tenable for two years, at the School of Mines, or some other institution of advanced scientific instruction.

CLIFTON COLLEGE,

Though recent in years, having been founded in 1851, has already sprung to mature development, and ranks with our great public schools. Its quick prosperity has surprised even the most sanguine promoters of the foundation, as many as 545 boys (including 45 in the Preparatory School), being now receiving the education of gentlemen. The success of the institution is chiefly owing to the judicious selection of head-master, a gentleman being appointed, not only of high University

attainments, but graced with attractive qualities of mind and disposition, one who like his own former master, Arnold of Rugby, has not only the art of instructing, but of gaining the truest respect of the pupils.

The religious teaching is in conformity with the doctrine of the Church of England, and "every boy must attend the eleven o'clock service in the College Chapel on Sundays."

There are five scholarships, that vary from £25 a year to £50, which may be increased to £90 a year from a special fund.

The terms are—Tuition and school fees, £25 per annum. Boarding fees, £72 per annum, or for boys under 13 years of age, £60 per annum. There is a junior school for boys between 10 and 14, the tuition and boarding fees being the same as for the College.

The proportion of masters to boys is "unusually large," being, in relation to the whole staff, one master to every 16 boys.

The leave of the Head Master is required for any boy to stay at the College if he is below the 6th form, being 18 years of age, or the 5th at 17, &c.

All coats and neckties must be black. The caps worn on week days are made for the College.

There are three vacations in the year: a spring vacation of about a fortnight, commencing about the middle of April; a summer vacation of about seven weeks, commencing in the last week of July; and a Christmas vacation of about four weeks, commencing a few days before Christmas Day.

The hours and arrangements for meals, &c., in the boarding houses are as follows:—Morning prayers at 7 a.m. in summer, at 7.30 to 8 in winter; breakfast at

8 ; dinner at 1.30 p m. ; tea at 5 or 6, the hour varying with the season ; supper at 9 or 9.15, according to a boy's place in the school ; evening prayers in the Junior School Boarding Houses at 9, in the others at 9.30 ; lights put out in bedrooms for Junior School at 9.20, for boys in the College at 10.0.

The meals are :—Breakfast, tea or coffee, with bread and butter and cold meat ; Dinner, meat and pudding, or on two days of the week, soup and meat, with beer ; Tea, tea with bread and butter ; Supper, bread and cheese or butter, with beer or milk.

All boys below a certain position in the school prepare their evening work for two hours under the supervision of a Master, the rest in their own studies without immediate supervision.

All boys at the school must board either with relations or in one of the boarding houses licensed by the Head Master.

Boys intended for the Royal Military Academy, Woolwich, or the Indian Civil Engineering College, Cooper's Hill, or the Direct Commissions' Examination, or the profession of Civil Engineering, can enter the Military and Engineering Side as soon as they are sufficiently advanced to benefit by the instruction given in it. Boys already in the College can enter as soon as they reach the Fifth Form either on the Classical or Modern Side ; those who are not in the College are required to pass a preliminary examination.

Head Master, Rev. John Percival, L.L.D., Prebendary, &c.

PROPOSED UNIVERSITY COLLEGE FOR THE STUDY OF SCIENCE AND LITERATURE.

We have now to invite attention towards an institution which as yet *exists* in little more than in name. The *existing* educational establishments of Bristol have been described ; but, in addition to these, it has been proposed, in order to complete the educational system, to establish a College of Science and Literature in Bristol for the West of England and South Wales. The principal purpose of this college will be to give instruction of an advanced character, with class-room and laboratory teaching, to those who are anxious to continue their studies after the usual school age, and to those who wish for technical training in the various branches of science. It would therefore be modelled somewhat after the pattern of Owen's College, and would be to Bristol and the West what that college is to Manchester and the surrounding district.

This movement is not absolutely new, inasmuch as it has for some years past been a matter of more or less private discussion in our city and neighbourhood ; but it may be said to have first assumed a practical aspect about the beginning of 1873.

At that time the faculty of the Bristol Medical School were proposing to establish themselves in new buildings, when they were met by the suggestion that the opportunity should, if possible, be used for the foundation of a Technical College of Science, of which the Medical School might form one department.

Negotiations were accordingly commenced with the Council of the Bristol Museum and Library, with the view to the establishment of such a college in connexion with their institutions. The result was the issuing of

a circular setting forth the advantages which such a college would bring to the West of England and South Wales, and appealing to the public for such aid as might be necessary to carry out the scheme.

At this stage of the proceedings, a communication was received from the Master of Balliol College, Oxford, informing the committee that his own college, and probably at least one other, would be likely to co-operate in such a work.

This led to further negotiations, which ended in a definite offer of co-operation from Balliol and New Colleges. That offer gave a new character to the movement, and from this point it must be considered to have been taken out of the region of merely local endeavours and to have involved issues of national importance.

The co-operation of these colleges takes the shape of a promise to assist in the establishment and support of the proposed college by means of a yearly contribution of £300 each for a period of not less than five years, provided so long as they continue their assistance (1) that they shall be represented on the governing body ; (2) that the instruction given be literary as well as scientific ; (3) that the requirements of adult education be specially considered ; (4) that the instruction (other than that of the medical classes) be open for women so far as can be arranged ; (5) that lectures on general subjects be provided.

To these conditions the committee who had taken charge of the matter readily assented.

A circular was then drawn up and distributed, and on June 11th, 1874, a public meeting, largely and influentially attended, was held in the Victoria Rooms, Clifton,

under the chairmanship of the Right Worshipful the Mayor of Bristol.

The amount of money asked for in the original circular is as follows: a capital sum of £25,000, and an annual subscription of £3000, secured for the first five years.

It was considered by the Committee that in order to establish the college on a permanent basis, this sum is in no way excessive, inasmuch as first of all, it will be necessary to provide suitable buildings and appliances.

Next, it is essential to the success of the institution that men of eminence in their several departments should be induced to become candidates for the professorships. In order to secure this object the larger portion of the capital would have to be invested for the purposes of endowment.

After the public meeting the committee proceeded to draw up a scheme for the constitution of the college, from which we extract a few of the leading features.

It proposes that the Government of the College shall be vested in the following bodies:—

1. The Board of Governors, which shall be the supreme governing body, and which shall consist of every subscriber of £5 and upwards, or donor of £50 and upwards, together with an *ex-officio* representative of each of the neighbouring counties, and of the principal towns in the West of England and South Wales.

2. The Council, which shall manage the financial and ordinary business of the College, and which shall consist of sixteen members—eight to be elected by the Board of Governors; one member to be elected by the Vice-Chancellor of the University of Oxford; one by

the Vice-Chancellor of the University of Cambridge; one by the Vice-Chancellor of the University of London; one by the Lord President of the Privy Council (or by any other member of Her Majesty's Government who may be discharging the functions of Minister of Education); two by the Contributing Colleges at Oxford; one by the Principal and Professors of the College (exclusive of the Faculty of the Medical School); one by the Faculty of the Medical School.

3. The Educational Board, which shall be composed principally of the teaching staff.

On this basis the committee proceeded to ask for contributions towards the establishment of the College. It was resolved that a local list should first be formed, and this list now (June 22nd, 1875), contains promises of support amounting to an aggregate sum of sixteen thousand pounds towards the expenses of the first five years.

It will be seen that the amount promised is as yet far short of the amount required. The committee feel that the project has very strong claims on the sympathy and assistance first, of all who profess any wish to help forward the progress of liberal education amongst our manufacturing, commercial, and industrial classes; and, secondly, of all who are in any way interested in the material prosperity of the West of England and South Wales, and who desire that we should not drop behind in the race with other countries or other districts in our own island. It is therefore confidently anticipated that the proposals need only to be more widely known to be more warmly supported; and it is hoped that the committee will shortly feel that they

have such an amount of sympathy from the general public, as will warrant the commencement of active proceedings, and will enable them to inaugurate an institution, which cannot fail to confer a lasting benefit on this city and neighbourhood.

HIGHER EDUCATION OF WOMEN.

APART from the public institutions already described, the secondary education of Bristol is carried on in a large number of private schools for boys and girls. The healthiness and beauty of Clifton has rendered it a very favourite situation for ladies' schools, and the number of them is very large. Most of them are private boarding schools, some are day schools, but there is no public day school for girls at present in this city. Some schools send pupils to the Oxford Local Examination, of which the centre is at Bath; but most who submit their teaching to this test, choose the Cambridge Local Examinations, for which Bristol has been a centre ever since the system was first established. The present honorary secretary is the Rev. R. W. Southby, 4, Royal Park, Clifton.

There have been examined at this centre from the year 1861 down to last year, 1874, Junior Students (boys), 621, of whom about 175 passed in honours. 279 simply passed, and 167 failed or were absent. The average of the numbers of candidates that have entered each year, though much larger than at first (27 in 61), has varied very little in late years. Last year 51 entered.

Of the Senior candidates there have entered during the same period 134 for examination, of whom 51 passed in honours, 44 simply passed, and 40 failed or

were absent. The senior candidates do not increase annually, but they have this praiseworthy feature about them, that more pass in honours than those who simply pass or fail.

Prizes have been offered at this centre from the commencement, each Senior candidate taking a first class having a £2 2s. prize in books.

A Junior first class candidate having a prize of £1 1s. in books.

Other prizes are also offered by the committee for any candidate who, having taken honours, has distinguished himself in any special subject.

Prizes for the same purpose have also been kindly presented by the Mayors of Bristol and others.

A Scholarship of £10 is also presented by the Charity Trustees, to any boy from Queen Elizabeth's Hospital who has taken a 1st class at this examination.

These examinations were opened to girls in 1865, and have been held here yearly since that time. The local arrangements are under the management of a committee of ladies, of which the honorary secretary is Mrs. Killigrew Wait, of St. Vincent's Hall, Clifton Park. This committee gives a gold medal to each girl gaining first class, and a silver medal to each gaining second class honours. The number of candidates presenting themselves for examination has risen from 13 in the first year, 1865, to 61 in December, 1873, and 52 in December, 1874. The total number in these ten years has been 123 Seniors, and 208 Juniors, 63 of the former have passed and 139 of the latter; 57 Seniors and 64 Juniors have failed altogether. The honours gained have been two first class, eight second class, and

thirty-three third class. The nearest centre for the Higher Cambridge Examination is at Cheltenham. Several ladies from Clifton have presented themselves there and passed well; and others have done so at the Women's Examination of the London University, which is held in London.

Associations have also been formed to provide the means of continuing the work of education beyond the ordinary school term. In 1869 the Bristol Evening Class Association began its operations, with the object of organizing evening classes for clerks, shopmen, artisans and others engaged in business during the day, and also of making those classes already in existence better known in the city. The hon. secretaries are the Rev. Dr. Percival and the Rev. R. B. Poole, of Clifton College, and the assistant secretary is Mr. H. J. Walker, Temple Colston School. These classes were originally formed exclusively for young men, with the exception of that for singing, which was always a mixed class of young men and women. Latterly separate classes in some of the subjects have been opened for young women also. Some of the classes are in connection with the Science and Art Department, South Kensington; others are held in subjects not recognised by Government. The Session commences in October and ends in April. Last Session (1874-75) there were classes in the following subjects: English Grammar and Composition, Greek, Latin, French, and German, Arithmetic, Mathematics, Plane and Solid Geometry, Theoretical and applied Mechanics, Acoustics, Light and Heat, Magnetism and Electricity, Animal Physiology and Physical Geography; Drawing—Machine, Architectural, Geometrical, Freehand, Model, and

Perspective ; Music, Singing, and Harmony ; Book-keeping and Shorthand. These were attended by about 700 students. The fee for each course of about twenty lessons was six shillings : they were held at various places, principally at the Athenæum, and at the Counterslip, Redcross Street, and Maudlin Street Schools. The distribution of prizes takes place at the end of September or beginning of October, and has been undertaken at different times by the late Canon Kingsley, the Bishop of Exeter, Lord Aberdare, and the Bishop of Gloucester and Bristol. The classes at Counterslip, under Mr. E. C. Plane, have been very successful, and have twice been awarded a premium by the Department of Science and Art at South Kensington.

Another association, having in view a similar object, but for the benefit of a different class of persons, is that for promoting the Higher Education of Women, which was formed in the spring of 1868 at a meeting held at Clifton College, under the presidency of the Rev. Dr. Percival. It is managed by a mixed committee of ladies and gentlemen, and the present honorary secretaries are Miss Catherine Winkworth, 21, Victoria Square, and Miss Alleyne, 2, Litfield Place, Clifton. It commenced its work by organising three courses of lectures yearly, which were delivered between the end of September and the end of June. To these were added, in January 1871, some smaller classes for the more continuous study of special subjects, and in 1872 it became a branch association of the National Union for Promoting the Education of Women. The same plan of operations is continued to the present time. The lectures and classes are held in the day

time, usually in the mornings, and are open to women only. The lecturers give questions in connection with their subject, which are answered on paper by those of the students who choose to do so; and also indicate a course of reading, for which facilities are provided by the committee through an arrangement with the Bristol Library. A room is set apart there for the use of these students, and the books recommended by the lecturers are placed upon the table. In the classes the masters set papers or hold periodical examinations as they judge best. Both the lectures and classes are entirely self-supporting, in the case of ladies engaged in tuition half-fees are charged. The principal ladies' schools send their most advanced pupils to the lectures, but the great majority of the students are beyond the school age.

The aggregate attendance for the Session at the lectures has averaged from 380 to 400; that at the classes began with 76, and was 106 in the Session just closed. The number of individuals availing themselves of these opportunities for instruction is of course somewhat less, as the same person frequently attends more than one lecture or class. The lecturers have been, with only one or two exceptions, graduates of Oxford, and for the most part gentlemen actively engaged in the work of the University. The classes have been taught by the assistant masters of Clifton College and the Bristol Grammar School. A course of lectures on Physiology and Hygiene was however given by Miss Chessar of London, and the classes in that subject are held by Miss Walker Dunbar, M.D. Speaking broadly the lectures deal chiefly with subjects of history and literature, and the classes with languages and science;

but the lectures have also included Astronomy, Political Economy, Logic, Physiology, and Music, while the classes have been held in English Literature, in Greek, Latin, and Italian; in Harmony; in Botany, Physiology, and Physical Geography. Seven courses of lectures have been devoted to the history and literature of England; others to those of Greece and Italy, and to important periods of European history.





BRISTOL AND ITS ENVIRONS.

SECTION VI.

Sanitary Condition and Arrangements.



THE sanitary arrangements of Bristol, whatever their good points or shortcomings may be, are the outgrowth of necessity, each step having been taken or extended as some urgent want has required it. New discoveries in medicine and of the nature of diseases, and further experience in the use of preventive measures, will doubtless render the sanitary arrangements of the future very superior to those of the present, as those of the present surpass those of the past.

The estimated population of the Parliamentary Borough (which forms the Sanitary District), to the middle of 1875, is 196,186. Density of population is 44·04 persons to an acre.

SEWERAGE.

The adoption of means for the removal of sewage is the first step to be taken by a community for the prevention of disease; of the various modes of doing this, the authorities of Bristol have adopted that of water carriage, by close tubes or drains, constructed of bricks and cement, or burnt stone-ware. Owing to the difference of level, and the different inclinations of the ground, the system of sewers in the Borough is very extensive, consisting, in fact, of six different sets of main sewers and communicating drains. To describe these at length would exceed the space at the command of the writer; the following short summary of them must therefore suffice.

The sewers, as they now exist, were commenced by the Old Commissioners of Paving and Lighting. Since the application of the Public Health Act to the Borough, in 1851, they have been carried on under the direction of the Town Council, acting as the Sanitary Authority. The greater part of them, that is all constructed since the year 1851, have been made according to plans drawn by, and carried out under the responsibility of, the Borough Engineer and Surveyor, Mr. Frederick Ashmead, C.E.

The aggregate length of the main sewers is about 150 miles, constructed at an expense of about £161,000.

At present they discharge their contents into the tidal river Avon, at six different points; but intercepting sewers of very large dimensions are nearly ready, which, when in use, will reduce these points of discharge to two, situated below the city, one on the north side and one on the south side of the river Avon; these two points will probably be ultimately reduced to one, by the con-

struction of a sewer under the river, to form a junction between them. As to the ultimate disposal of the sewage nothing has as yet been settled; the levels have been so arranged that the main intercepting sewers may be extended to the river's mouth, seven miles below the city, to discharge their contents into the channel; or that all the sewage may be brought to one point on the south side of the river, there to be treated by some plan for the utilization of sewage, which may be selected by the Sanitary Authority. This being chiefly an engineer's question, I shall speak of it with diffidence. It appears that to carry the sewage to the mouth of the river by extension of the sewers, or to allow it to flow into the tidal river, as at present, would be an error. Owing to the peculiar situation of the point of discharge in the gorge of the Avon, to apply it for the irrigation of land is utterly impracticable. If this view be correct, the Sanitary Authority will have to select and adopt one of the different plans for depositing the solid part of the sewage in tanks, to be afterwards utilized as manure or otherwise, and for deodorizing the fluid part before it is turned into the tidal river. The Sanitary Authority require all communications with the public sewers and drains to be properly trapped and approved of by their Surveyor.

It only remains for me to state that the sewers and drains have most fully answered the purpose for which they were constructed, viz., the removal of sewage, and the improvement of the health of the inhabitants.

WATER SUPPLY.

The population is now chiefly supplied with water drawn from different parts of the Mendip range of hills,

in Somersetshire, by a private company. The chief source of supply is 16 miles distant from Bristol; this is supplemented by water drawn from other sources, nearer to the city, especially from Chelvey, and conveyed into the main reservoirs by pumping. The supply of water is ample and excellent in quality, as the following analysis by the City Analyst shows:—

THE BRISTOL WATER WORKS COMPANY.

	Grains.
Carbonate of Lime - - - - -	14.55
Sulphate of Lime - - - - -	3.60
Chloride of Calcium - - - - -	0.63
Chloride of Sodium - - - - -	0.06
Chloride of Magnesium - - - - -	a trace
Peroxide of Iron - - - - -	0.18
Silica - - - - -	0.06
Organic Matter - - - - -	0.12

Total contents per gallon - 19.20

Hardness, as estimated by Clark's test, is 18.3°

The organic matter was estimated by the method proposed by M. Forckhammer, and also by that of Messrs. Chapman and Wanklyn.

The hardness of the water, which is moderate, being chiefly due to the Carbonate of Lime, which deposits on boiling, it is well adapted for tea making, a point of considerable importance to thrifty householders; when boiled, the water is also well adapted for washing and other domestic purposes; but its chief point of commendation, in a sanitary sense, is the fact of its being derived from sources above the reach of human contamination, and having thus the seeds of disease contained in human excreta excluded from it. No case of enteric fever has, within the writer's knowledge, ever been

traced to this water, and the rate of mortality from diarrhœa in the city has, for some years, been the lowest in England.* These two facts are a sufficient guarantee of the fitness of the water for domestic use.

The aqueducts, tunnels, and iron pipes, by which the water is conveyed, and the reservoirs in which it is stored, are monuments of engineering skill, well worthy of a visit from strangers.

THE SCAVENGING.

This is done by contract, generally let for three years; the conditions of the contract are minute and stringent. The principal thoroughfares are swept and cleansed daily, the others twice or three times a week, or, as the case may require, according to the state of the weather. The scavenger's carts go their rounds regularly to remove all house ashes and refuse. The public are required to put these in places convenient for removal by the scavengers at their periodical calls. As a matter of convenience to the residents of the poorer parts of the city, who are frequently without any utensils to keep their ashes in until removed by the scavengers, the Sanitary Authority have placed large iron boxes as receptacles for such ashes, in convenient places, near populous courts and alleys. Where these are used for the purpose intended by the Sanitary Authority, that is, as receptacles of dry ashes for removal by the scavengers,

* The average annual death-rate from diarrhœa in Bristol, during the third quarters of 1872, 1873, and 1874, was only 1·9. This was not only lower than the same rate in any of the large towns, but considerably lower than the average rate of mortality from this disease in England and Wales, during the same quarters, which was 2·55.

they are a great convenience to the houses near them, and harmless in their effect; but through the misuse of these by people throwing into them the refuse of fish, cabbage, and other garbage, they have, in many instances, become offensive nuisances, and on this account many have been removed. Judging by the reports of the District Inspectors, I consider it will become a question for consideration whether any of them ought to be retained.

WATERING OF THE STREETS.

All the principal streets of the city are well and carefully watered, during dry weather, from the 1st day of April to the 30th day of September. This is done by contract, taken for three years. The water is supplied at a rate agreed upon, from the mains of the Bristol Water Company.

HOSPITALS.

The principal medical charities of the city are the Royal Infirmary, the General Hospital, and the Bristol Dispensary. These institutions, having regard to the population, are in extent and management second to none in the country. Into the two former institutions patients suffering from infectious diseases are very sparingly admitted; cases of enteric fever are occasionally brought into them, but no other form of infectious disease is admissible. The officers of the Dispensary attend patients at their own homes, but have no means for the isolation of patients. These institutions, therefore, are, strictly speaking, intended for the treatment and cure of disease, and not for the prevention of it. The next series of hospitals are those, the primary object of

which is the *prevention* of disease, by affording means of isolation for persons suffering from infectious diseases. Without such hospitals, every large community must be comparatively helpless in combating zymotic epidemics. The three Poor Law Boards of Guardians, between whom the Parliamentary Borough is divided, have respectively erected hospitals outside the Borough, for the purpose of removing from the Borough, at as early a period as possible, all paupers suffering from infectious diseases.

The Bristol Board having authority over the 19 ancient parishes, have their hospital at Stapleton, about three miles from the city, with room for 60 patients. The Barton Regis Union (formerly Clifton) have their Hospital in Fishpond's Road, with accommodation for 24 patients. This having been found too small, plans have been prepared and approved of to enlarge it, so as to accommodate 50 patients. The Bedminster Board have their hospital on Bedminster Down, with accommodation for 20 patients. The different relieving officers are extremely prompt in removing into these hospitals all destitute people reported to them to be suffering from infectious diseases.

The Sanitary Authority have, under the provisions of the Sanitary Act of 1866, erected two hospitals in St. Philip's, containing 40 beds, one for the isolation of cases of fever, the other of small pox, occurring in persons not paupers or destitute, but without means of isolation at their own homes. A small charge, not exceeding £1 per week, is made on the patients or their friends for maintenance and treatment whilst in the hospital. These hospitals have now been in operation for several years, and, with the single exception of

that of the Barton Regis (formerly Clifton) Union, in Fishpond's Road, have supplied ample accommodation for all patients requiring removal into them. This is, as I believe, chiefly due to the extensive system of district inspection, disinfection, the removal of nuisances and other steps, and, above all, to the early removal of infected cases from the general community.

Cases of infectious diseases occurring on board ships in the port, or in Bristol waters, are removed by the Medical Officer of the Port, who is also the Medical Officer for the City, into the hospitals of the Sanitary Authority. A charge is made on the owners of such ships for the maintenance of, and medical attendance upon, such patients whilst in the hospital.

SANITARY INSPECTION.

This is effected by a Medical Officer, and a Superintendent Inspector of Nuisances, assisted by five assistant District Inspectors. Each District Inspector has under his control two skilled labourers to do menial work, such as the immediate removal of minor nuisances not requiring constructive work, to white-lime courts and alleys in the summer, and to disinfect houses and clothing.

The whole city is divided into five districts, and apportioned between the District Inspectors, who are held responsible for their respective districts. The whole of the inspecting staff meet daily, at 12 o'clock, at the Offices in Prince's Street, when the District Inspectors report to the Medical Officer, and to the Inspector of Nuisances, on the condition of the districts, the prevalence or absence of infectious diseases, and

other matters within their province, and receive instructions on every case reported.

In addition to their work of a purely sanitary character, the District Inspectors have also to superintend and report on the cleansing and watering of the streets, and to deliver notices and other official papers within their districts. The system of inspection carried on here, differs from that of most, if not all, other places in the removal of minor nuisances, the liming of courts and alleys, and other work properly within the duties of a landlord, by the officers, and at the cost of the Sanitary Authority. Every one practically acquainted with the difficulty of having such nuisances remedied by the landlords or occupiers of poor tenements, will readily understand why the system was adopted here, viz., to avoid delay, and prevent the spread of disease. Each District Inspector has at present, on an average, a population of about 40,000 under his supervision. In the wealthier parts of the city I do not consider this number too large, but in the poorer parts half the number would provide sufficient occupation for a good man. As the city is increasing very rapidly, the number of Inspectors will have to be increased at no distant period.

The system of inspection works well, and is here, as it must be in every other place, an indispensable supplement to good drains, good water, and hospital accommodation.

Every ship in the port, or in Bristol waters, is subject to the inspection of the Officers of the Port Sanitary Authority, in the same manner as a house within the district. The Port Sanitary Authority and the District Sanitary Authority, in this case, are one and the same body, viz., the Mayor and Corporation of Bristol.

DISINFECTION OF INFECTED HOUSES AND CLOTHING.

When a house is known to be infected and no means have been adopted by the owner or occupier to disinfect it, the responsible parties are required by the Sanitary Authority, under the provisions of the Sanitary Act, 1866, to have this done. The Sanitary Authority, through the district inspectors, disinfect houses and clothing gratuitously for the poor and people of only moderate means. A small charge is made for doing this for the wealthier classes. In all cases after disinfection the owner or occupier is required to cleanse and purify the premises at his own expense. The mode of disinfection generally adopted for a room is to fill it with pure Chlorine gas, evolved from a mixture of common salt Binoxide of Manganese and Sulphuric Acid, after first closing the windows, the fire place, and every crevice in the walls: the door is then shut and the room kept closed for 24 hours. The bedding and other articles of clothing are afterwards removed by the officers of the Sanitary Authority for further disinfection in a hot air apparatus. The room is then cleansed.

Another very effective method of disinfecting houses is, to force into a room, by means of an ingenious apparatus called the "Asphyxiator," a large quantity of sulphurous acid gas. When this is adopted, the quantity of gas thrown into the room acted on, should be such as to render the atmosphere of it fatal to any organic life within it; the room should then be kept closed for twenty-four hours, and afterwards cautiously opened and ventilated. To disinfect a large room by this process requires the consumption of several pounds of

sulphur, and a man to be employed for several hours working the bellows of the apparatus. This method is now exclusively used by the Sanitary Authority for disinfecting infected cabs and other carriages, and the different wards of their hospitals, when empty. It is certainly very effective, but entails a little more trouble than the chlorine plan of disinfection.

For the disinfection of clothes, bedding, and other such articles by hot air, a large iron oven, heated by gas, has been set up by the Sanitary Authority; in this the infected articles are exposed for an hour or more to a heat of 250° Fahrenheit. Whilst the articles are in the oven, sulphurous acid gas is forced into it by means of the Asphyxiator. The temperature of the oven can be raised to 300°; but it having been found by experiment that some fabrics scorch at this heat, it is considered unsafe to raise the temperature above 250°.

In addition to the above means of disinfection, the men under the District Inspectors visit the courts, alleys, and poorer parts of the city regularly, and apply antiseptics and disinfectants to closets, drains, gullies, and other places, if anywise offensive or supposed to contain infection. For this purpose Calvert's Carbolic Acid Powder, containing 15 per cent. of pure Carbolic Acid, and coarse Sulphate of Iron, are exclusively used. These disinfectants are supplied to the poor gratuitously when required. In case of typhoid fever or cholera being reported in any house, the whole of the communicating drains in the locality are disinfected with Sulphate of Iron and Carbolic Acid.

AMBULANCE FOR THE CONVEYANCE OF PERSONS SUFFERING FROM INFECTIOUS DISEASES.

To obviate the necessity of using public conveyances for this purpose, the Sanitary Authority have set up a large and convenient carriage, and placed it at the command of every qualified medical practitioner, free of charge. This externally, for obvious reasons, cannot be distinguished from a private carriage; the interior is lined with American leather, which can be washed without injury to the material. After each time of using, the carriage is cleaned, and disinfected with Sulphurous Acid Gas by means of the Asphyxiator. Parties making use of the ambulance are required to find a horse and driver.

MORTUARIES.

Two mortuaries for the reception of dead bodies found in the city by the police, and also for the reception, under the provisions of the Sanitary Act, by order of the Justices, of corpses improperly retained in private houses to the danger of the inmates, have been provided by the Sanitary Authority. One of these is situated in Meadow Street, St. Paul's; the other near the Marsh Bridge, St. Philip's. In justice to the good sense of the inhabitants, it should be stated, that for the latter purpose they have not once been used, friendly remonstrance with the friends of the deceased, and an explanation of the Act of Parliament having as yet, in every case, succeeded in getting a speedy interment of a corpse improperly retained, unburied.

RESULTS.

To estimate accurately the results of the sanitary measures, commenced since 1851, is difficult, and it is still more so to apportion the results between the different steps taken. This difficulty is increased by the fact that, previous to the year 1865, the statistics of the Parliamentary Borough of Bristol, which is co-extensive with the district of the Sanitary Authority, were not published in a separate form by the Registrar-General. In 1850, an exhaustive inquiry was made by a Government Inspector (Mr. Clarke); it was then found that the average death rate was 28. Since 1865, the rate of mortality has averaged from 22·5 to 23·5. In this respect, Bristol has of late years vied with the Metropolis and with Portsmouth for the place of honour on the Registrar-General's returns. Possibly the best way of forming an opinion on this subject would be by studying the course and progress of epidemics when introduced from without. In 1849, Asiatic cholera was introduced, and it killed here in that year 1979. In 1854, it was again introduced, the drainage of the district having then been partially improved, and the Company's water having become more generally used, the deaths from cholera, in this year, amounted to only 430. In 1866, when the new sewers had been considerably extended, the use of the Company's water had become more general, and the present system of inspection had been in practice for a year, the disease was again introduced from without at six different points; these points, by infection, increased to 26, but only 29 deaths occurred from this epidemic; the means adopted were successful in stamping out the disease and preventing its spread at each infected point. This

being a disease which spreads chiefly by disseminating its seeds by means of the excreta, it would have been impossible successfully to combat an epidemic of it, without such sewers and water supply as we now have; and I cannot conceive of any other system of sewage removal that could be safely substituted for it, for the mixed and undisciplined population of the courts and alleys of a large town.

At short intervals, during the present century and before, the city was periodically visited by epidemics of maculated typhus; the last occurred in 1864 and 1865, when about 150 persons died of this disease. The Sanitary Authority then expanded its system of inspection into its present form. Since that date, this disease has been frequently introduced into the district from Ireland, Glasgow, Manchester, and London, but it has not prevailed as an epidemic since 1865, having been successfully stamped out by the Inspecting Staff of the Sanitary Authority on each occasion. This being a disease which has no connection, within my experience, with sewers or water, the success must be ascribed solely to the Sanitary Inspecting Staff.

We have still, from time to time, a few cases of enteric fever, the majority of these are either introduced from without, or occur in houses in which well water, contaminated with sewage, is used for domestic purposes; when this is found to be the case, the landlords of such houses are required, by the Sanitary Authority, to procure a supply of the Company's water.

We have also occasional epidemics of small pox, and shall continue to have, until the authorities succeed in overcoming the prejudice and carelessness of many of

the public regarding vaccination. A considerable number of unvaccinated persons migrate into Bristol from the surrounding country districts; these, when attacked with the disease, take it in a severe form, and become long-continued centres of infection for others. However, by the vigilance of the different vaccination authorities of the city, the means of isolation now at command, and the action of the officers of the Sanitary Authority, these epidemics have lost their force, and do not reach extensive or alarming dimensions.

There are still three zymotic diseases unmentioned, which, on an average of years, cause a considerable mortality in Bristol, as they do in every other large community, viz., scarlet fever, measles, and whooping cough. These diseases being so slightly, if at all, dependent on general sanitary conditions, but on direct infection from the person or infected clothing, and affecting chiefly young children, offer special difficulties to Sanitary Authorities and their Officers. It is true much may be done to limit these diseases, by the strict observance of rules against infection by intelligent friends and nurses of the patients, but to get these rules observed by the mass of the population is more than the writer dare hope for, nevertheless the Officers of the Sanitary Authority do the best in their power to prevent their spread by the distribution of printed rules, disinfection, and isolation of patients when practicable. It is to be hoped that new discoveries in Hygiene will enable Sanitary Authorities to deal more efficiently with this group of zymotics.

I append a table of the relative salubrity of large towns, extracted from the Registrar-General's returns for 1874. The figures opposite Bristol are a fair indi-

cation of our average condition. The rate of mortality here given to the whole of the Parliamentary Borough, is not equally distributed. It varies in the ten different registration districts into which the city is divided, being influenced, in the different districts, by their geographical position, class of inhabitants, the birth rate, and other causes. Of the different registration districts, that of Clifton is pre-eminently the healthiest, having an average annual mortality of about 14.0 per 1000. This most healthy of English watering places has hitherto suffered in its good name from having given a name to a Superintendent Registrar's district, in which have been hitherto returned all the deaths from the Out-parishes of Bristol, and also all the deaths among paupers, removed from the ancient city into the Workhouse and Lunatic Asylum, situated in the so-called Clifton District. This libel on the good name of Clifton was deeply felt by our late eminent fellow-citizen, Dr. Symonds; he tried to have it remedied but failed. At last, the sense of justice of the President of the Local Government Board, of the Registrar-General, and of the Board of Guardians, has effected what Dr. Symonds was the first to attempt.

This district (Clifton) is free from all endemic disease, and it is very rarely that deaths from zymotic diseases are registered in it. It has more than its fair proportion of deaths from phthisis, owing to the importation of many cases of this disease from other places.

MORTALITY IN EIGHTEEN ENGLISH TOWNS.—The following table shows the number of deaths in the fifty-two weeks ending 2nd January, 1875 :—

Boroughs, &c. (Municipal boundaries for all except London.)	Annual rate of mortality per 1000 living.	The deaths registered included deaths from							
		Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Whooping cough.	Fever.	Diarrhea.	Violence.
London	22.5	56	1655	2662	365	1861	1554	3077	2770
Portsmouth	20.4	2	55	35	24	105	105	113	58
Norwich	23.5	...	6	2	8	17	34	101	57
Bristol	22.7	26	66	22	14	43	84	159	156
Wolverhampton ..	23.9	1	49	34	6	37	46	101	49
Birmingham	26.8	639	134	741	73	248	199	616	398
Leicester	24.1	..	24	23	8	43	56	256	50
Nottingham	24.8	...	19	49	9	24	59	140	59
Liverpool	32.0	30	444	1911	54	516	433	879	716
Manchester	30.4	10	226	495	11	319	215	668	334
Salford	29.6	4	138	156	14	133	124	296	115
Oldham	29.7	1	84	72	12	96	45	90	68
Bradford	27.0	60	137	288	3	68	106	230	111
Leeds	28.7	34	185	664	29	143	205	502	188
Sheffield	26.9	1	75	672	21	132	190	475	193
Hull	25.5	3	50	184	12	49	170	222	104
Sunderland	23.4	...	60	136	14	16	70	171	89
Newcastle-on-Tyne	29.2	...	16	258	14	104	116	236	172





BRISTOL AND ITS ENVIRONS.

SECTION VII.

Physical Geography and Geology.

PHYSICAL DESCRIPTION.



BRISTOL is situated in North Latitude $51^{\circ} 27' 6.3''$ and West Longitude $2^{\circ} 35' 28.6''$.

The city lies on low ground, in a somewhat triangular basin formed by the vallies of the rivers Avon and Frome; the latter a small tributary from the north east, which flows through the picturesque little valley of Glen Frome, and not to be confounded with the larger stream passing by the town of that name. Where the Avon debouches from the Conham gorge, it spreads into a broad valley which it has lined with alluvial deposits. On this low land much of the old city is situated, viz., the parts round Temple Street, Marsh Street, Queen's Square and Canon's Marsh, while

High Street and Redcliff Hill stand on solid ground superior to the alluvial plain ; part of the latter is so little above the level of high tide—though the city is seven miles by water from the mouth of the river—that at spring tide the waters have been found to overflow and fill the cellars of the houses which line the river in the Hotwells and Quays. The river Avon which here divides the counties of Gloucester and Somerset, also separates the city into two portions. The artificial bed or New Cut is excavated in the New Red Sandstone, which is not left uncovered along the natural course of the river, *i.e.*, the existing Floating Harbour.

But the population have long ago, in great measure, ceased to confine their dwellings to the low ground, and extending gradually up the hills, now crown all the heights with their houses, so that the Clifton Union district contains twice as many inhabitants as Bristol.

These hills are more or less broad table-lands, and we may speak of them as the north-western, the eastern plateaus, and southern ridge. The steep acclivities on the north, which we ascend in leaving Bristol, are seen to be the edge of a large plateau of Palæozoic rocks structurally, though these are sometimes masked by later rocks, such as Lias, lying upon them in discordant stratification ; the inclines of Granby and Clifton Hill (237 feet), Brandon Hill (259 feet high), are descents from this high ground towards the Hotwells. Again, the end of this upland plateau extends eastward from here by Park Street along Kingsdown Parade (220 feet), from whose abrupt slopes the city, with its fine church towers, may be overlooked to great advantage. The whole of this ridge so far consists of the hard siliceous beds of the Millstone Grit,—dipping at a high angle

with the rest of the Palæozoic beds,— and these same grits also face the edge of the plateau on the Leigh Down side of the river. To this plateau belongs Durdham Down (312 feet), which is intersected by the Avon gorge, and that in so picturesque a fashion that Clifton must always be famous for its river scenery. The high land on the Leigh side is to all intents and purposes one and the same table-land with Durdham Down, for the Clifton gorge has little to do with the structure of the country,—its formation is entirely subsequent to the upraising of the anticlinal arch of Old Red and Carboniferous rocks which either continuously or in a series of echelons runs through the district from Clevedon to Tortworth. The renowned Avon gorge is but a notch in the ridge, a mark indeed of the tooth of time, but a small matter compared to the lengthened processes by which the old Palæozoic rocks were raised in dome-shaped ridges, and were then cut down some 5,000 feet lower by the inexorable plane of denuding agents, till the shorn-off edges of the uplifted strata were left as the level table of Durdham Down. The height of the Observatory Hill, Clifton, is 315 feet, and that of Ashton Tump 270 feet.

To the south of the town extend the swelling slopes of Knowle and Totterdown, which extend round Dundry Hill in a belt of intermediate height, and which has for its *raison d'être* the existence of nearly horizontal beds of Lias limestones below, harder and more capable of resisting denuding forces than the clays which have been cut back at the intermediate base of Dundry Hill. The summit of this hill is 769 feet above mean sea level; the solid Jurassic beds which crown the ridge are in the same way the cause of the existence of this

high ground, which bounds the horizon for a considerable sweep on the south.

On the east of the city we have irregular high land, with an average height perhaps of 180 feet. It extends from the river Frome on the north east to the cliffs which bound the river Avon by Conham and Brislington: it consists for the most part of coal measures, and contains the sites of numerous coalpits. It is the hard Sandstones (Pennant) of the coal-period which are cut through by the Avon in the picturesque windings of the river by Conham.

So much for the high ground immediately round Bristol, and beneath which the old city itself lies nestled and necessarily much protected from high winds. The average rainfall is $32\frac{1}{2}$ inches and the mean annual temperature is about 52° Fahr.

The Bristol Avon has a drainage area, counting all its tributaries, of about 900 square miles. The difference between high water at spring and neap tides at Cumberland Basin is considerable, viz., occasionally 18.4 feet.* The mean spring rise is here $30\frac{1}{2}$ feet, and at Avonmouth 40 feet.

The limits assigned to the following scientific sketches of noteworthy objects in the neighbourhood of Bristol are those comprised within the remarkable "Map of the Bristol Coalfields," by W. Sanders, F.R.S. This map, the work of a lifetime, and excellent even topographically, is a work of which the city may be proud, for nowhere else has a survey of similar detail been produced.† The map includes 720 square miles

* Kindly communicated by C. Howard, Esq., C.E.

† The Government Geological Survey Map is based on that of Mr.

in round numbers, and extends from Berkeley, on the north, to Wells, on the south, and Bath, on the east.

HISTORY OF BRISTOL GEOLOGY.

The neighbourhood of Bristol was early a favourite place of study among geologists, owing doubtless to its natural advantages in this way, and from the number and variety of formations to be found here, as much as to the fact that Bristol was in old days one of the principal towns of England famous both in commerce and in letters. The coalfield was the subject of an essay in the Philosophical Transactions by Mr. Strachey so far back as 1719. Near the end of last century we have the writings of Rev. Catcott (1761), and figures of fossils by J. Walcott; then in the first decades of this century numerous investigators were at work, the chief observations being those of H. Warburton, T. Weaver, G. Cumberland, Drs. Bright, Gibbes, Gilby, and Prichard. The chief authorities on our district are Sir H. de la Beche, and Messrs. Buckland and Conybeare; the paper by the two latter, though old, still remains by far the best general account of our district. The works of these standard authorities, and of some later writers, will be cited in foot notes, but those who wish a complete list of the literature of Gloucestershire and Somersetshire geology will find one in the forthcoming volume of the Geological Survey on these counties. We must not forget however the "father of English geology," W. Smith, who in his surveys for the Somersetshire Coal canal, within our area, laid the foundations of stratigraphical geology.

Sanders. See remarks of Sir H. De La Beche, in "Memoirs of Geological Survey of Great Britain," vol. i., p. 126.

STRATIGRAPHICAL GEOLOGY.

A mere enumeration of the so-called formations, or divisions into which rocks are grouped, will show the varied structure of our area.

The Upper Silurian rocks are present in the following members, *viz.*, Upper Llandovery, at Charfield and Damory Bridge; Wenlock Shale and Limestone also near Tortworth; Ludlow beds round Berkeley.

The Old Red Sandstone occurs in several parts of the district, *e.g.*, Portishead, where it has yielded Fish-remains, Hung Road and Sneyd Park, between Purton and Berkeley, and in several places on the Mendips, *viz.*, Black Down, North Hill, Beacon Hill, &c., in all of which places it is found to be in the axis of elevation, and has been exposed in consequence of the removal of the superjacent strata.

The Carboniferous limestone accompanies the Old Red Sandstone and forms the outer rim round the Gloucestershire coal basin; it also constitutes the chief part of the Mendip range, Broadfield Down, Leigh Down, and Durdham Down elevations.

The Millstone Grit is seen in Brandon Hill,—it generally accompanies the C. Limestone, as round the Cromhall Basin, Yate, &c.

The Coal Measures, of such importance economically, are present over a large part of our area, but in the Radstock district they are masked by a covering of Secondary rocks (the Permian is entirely absent).

The New Red Sandstone and Marl, including the Magnesian Conglomerate, covers a large area in the immediate neighbourhood of Bristol, and is scattered throughout the whole district.

The Rhætic beds, of late so much studied by geolo-

gists, present perhaps a greater abundance of good sections than at any other district in England. Aust-Cliff has yielded a greater number of *Ceradotus*, both in species and individuals, than have been found elsewhere. The White Lias, essentially a West of England formation, is found in all parts of our area where the beds of the Lower Lias are exposed. The lower zones of the Lower Lias are in force.

The Middle Lias is more sparingly distributed; the Radstock district shows us the lower zones of this division, while the Marlstone proper is well seen round Stinchcombe, &c.

The Upper Lias is said to exist as a thin band along the slopes of the Oolite hills, and may be found at Wotton-under-Edge.

The Midford Sands (Inf. Ool. or U. Lias Sands) are well developed.

The Inferior Oolite Limestones enter largely into the structure of the Cotswolds, and yield valuable building freestones all along the range, and at Dundry, &c.

The Fullers' Earth and Fullers' Earth Rock, are found round Bath, and therefore come within a convenient distance for examination.

The same may be said of the Bath Oolite, from which the well-known excellent freestones are obtained; the succeeding divisions Bradford Clay, Forest Marble and Cornbrash only just occur within our area, but may be easily reached from Bristol.

There is one small patch of Greensand on Mr. Sanders' map, and this member of the Cretaceous series is therefore added to those occurring in the district, but no further notice of it will be necessary.

It will be desirable now, as far as space allows it, to

consider the more important of these various divisions somewhat in detail, giving petrographical and palæontological features, and noticing their relations to each other when that affords any elucidation towards the structure of the country and the history of life on the earth in geologic times.

SILURIAN.

In our review of the Strata we must examine first the Upper Silurian deposits, which are to be taken as the earliest beds, and base of our exploration in the Bristol Coalfield.

We are fortunately able to examine the Silurian beds in the neighbourhood of Tortworth and Falfield, where they are brought to the surface within our reach, and afterwards well exposed for study by denudation. These strata are a continuation of the rocks of Mayhill, Huntley, and Woolhope. At Flaxley the Silurian beds dip beneath the Devonian rocks, and re-appear at the eastern bank of the Severn at Purton, where they may be seen as an anticlinal.

The Silurian deposits within the boundaries of our map are divided into three groups,—the Upper Llandovery or Mayhill Sandstone, the Wenlock Limestone and Shale, and the Ludlow Shales.

I.—THE UPPER LLANDOVERY SANDSTONE.

At Purton these beds are too deeply seated for observation; there the upper groups only appear, and are exposed at the lowest tides, as seen in the following sections.

FIG. 4.—*Section near Purton.*

a Devonian.—*b* Ludlow.—*c* Wenlock Limestone.—*d* Wenlock Shales.—*e* Trias.—*f* Rhætic.—*g* Lower Lias.

The most northerly point in which we come into contact with the Upper Llandovery beds is at Malford Common and Swanley Green. It then continues through the Tortworth district, where it may be studied for a distance of three miles, from Cinderford Bridge to Whitfield. The Upper Llandovery beds may be considered as the Passage beds between the Upper and Lower Silurian. They consist of micaceous Sandstones and Shales, having altogether the thickness of 1000 feet. Some are nearly all sand, while others are very argillaceous and fissile. The most fossiliferous spots are on the top of the sandstone, where they may easily be perceived by the purple colour and burnt appearance of the stone. These and the thin Shales may be found near Damory Bridge, where the fossils are extremely abundant and tolerably well preserved. An excellent spot is at the roadside, a few yards west of Damory Trap quarry. From this spot to the quarry the mineralogist may collect a most interesting series of specimens, shewing the gradual change of loose sand into solid and compact quartz. It was by this trap, the remains of the original molten lava, that these Upper Llandovery beds were uplifted and so exposed to view and partially

altered. In those parts nearest the surface, which allowed the steam and gases to escape, the impressions of the bubbles are still visible, forming the rock which is called by mineralogists Amygdaloid.

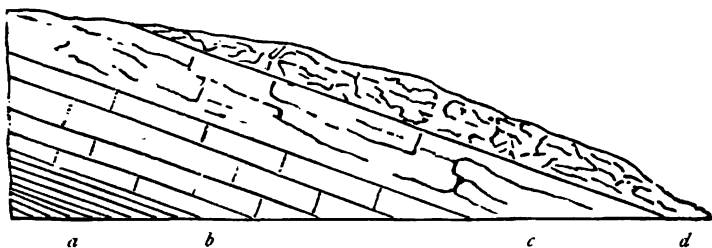
The following is a list of the principal fossils that may be met with in the Llandovery beds of the Tortworth district:—

Petraia bina (Lonsd); *subduplicata* (McCoy); *elongata* (Phill); *Favosites Gothlandica* (McCoy); *Forbesi* (M. Edw.); *Hisingeri* (M. Edw.); *Tentaculites Anglicus* (Salt); *Cornulites serpularius* (Schl.); *Phacops Stokesi* (M. Edw.); *Weaveri* (Salt); *Stricklandinia lens* (I. de C. Sow.); *Pentamerus oblongus* (I. de C. Sow.); *Rhynchonella decemplicata* (Sow.); *Nucula* (Sow.) *Llandoveryana* (Dan); *Weaveri* (Salt); *Atrypa hemispherica* (I. de C. Sow.); *reticularis*, var *orbicularis* (L.); *Spirifera elevata* (Dalm); *exporrecta* (Worhl); *crispa* (Kissinger); *Strophomena rhomboidalis* (Walck); *arenacea* (Salt); *compressa* (Sow.); *Orthis reversa* var *Mullockiensis* (Salt); *calligramma* (Dalm), not *flabellulum*; *elegantula* (Dalm); *Pterotheca* sp.; *Pterinea retroflexa* (Wahl); *Modiola* sp.; *Euomphalus funatus* (Sow.); *sculptus* (Sow.); *Cyclonema ventricosa* (Hill); *Raphistoma lenticularis* (Sow.); *Holopella obsoleta* (Sow.); *gregaria* (Sow.); *Bellerophon trilobatus* (Sow.).

II.—WENLOCK SHALES AND LIMESTONES.

These beds may be seen throughout the neighbourhood of Tortworth, Avening Green, Falfield, &c.

The following section may be seen in the middle of a field near Falfield:—

FIG. 5.—*Falfield Section.*

- a* Coloured schist.—*b* Purple encrinital limestone.—*c* Irregular limestone with corals : Encrinites, *Spirifer*, *Orthis*, &c.—*d* Rubble beds.

1. At the top is a rubbly bed with fossils, but all in a very imperfect state.

2. Limestone having a purplish colour, apparently derived from animal matter, irregularly bedded and containing a great number of fossils, such as Wenlock corals and Encrinites, *Spirifer radiatus*, *Orthis elegantula*, &c.

3. Purplish limestone, with numerous remains of Encrinites.

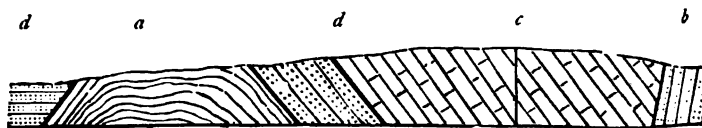
4. Red and green schists, the base of which is not exposed.

In this section all the beds dip to 45° east. Not far from Tortworth Court is an anticlinal, a section of which is now and then exposed (fig. 6). At a fortunate visit, when a small opening was made, the following list of fossils was obtained :—

Crania implicata (Sow.); *Siluriana* (Dav.); *Spirifera sulcata* (Dav.); *plicatella*. var. *radiata* (Dav.); *Meristella didyma* (Dalm.); *Rhynchonella borealis* (Schlot.);

navicula (Sow.); *Wilsoni* (Sow.); *Orthis elegantula* (Dalm.); *basalis* (Dalm.); *Strophomena Wilsoni*; *depressa*; *euglypha*; *Corals and Encrinites*.

FIG. 6.—*Tortworth Anticlinal*.



a Upper Silurian.—*b* Devonian.—*c* Carboniferous.—*d* Trias.

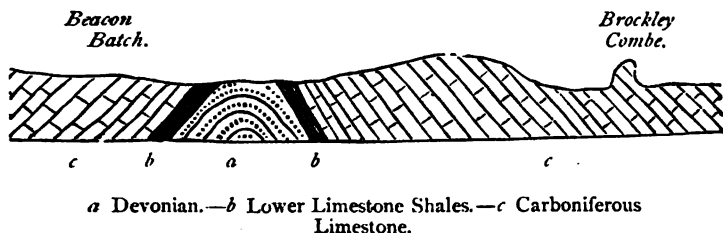
The *Orthis basalis* and *Crania Siluriana* are fossils as yet only found in the Falfield district. Another good section may be examined near Avening. Here the Wenlock coral bed is actually lifted up by an outburst of lava, with the corals altered by the heat.

III.—THE LUDLOW SHALES.

These, so extensively extended over the country, are not well situated for the collection of fossils. For this reason no satisfactory list of fossils can be made.

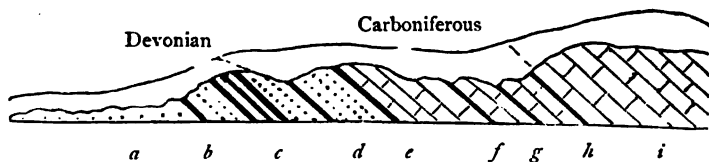
THE DEVONIAN.

The Devonian, or Old Red Sandstone, in the neighbourhood of Bristol, comprises Sandstones, Shales, and Conglomerates, usually coloured strongly with Ferric oxide, but sometimes purplish, yellow, or green, from the presence of Ferrous oxide. The Devonian character differs from the Silurian, because the beds of the latter are very argillaceous and calcareous.

FIG. 7.—*Brockley Combe Section.*

As shown in Fig. 7, the old Red Sandstone underlies the Carboniferous, and in point of sequence intervenes and separates it from the Silurian.

In many places the junction between the Devonian and Carboniferous beds is exposed, as for instance at the side of the Avon under Cook's Folly (Fig. 8.)

FIG. 8.—*Junction of Devonian and Carboniferous at Cook's Folly.*

a Micaceous beds.—b Quartzose Conglomerates.—c Three beds of rolled Quartz pebbles.—d Last bed of rolled Quartz.—e First Calcareous bed.—f *Athyris* bed.—g Entomostraca and plants.—h *Modiola* bed.

The transition from one to the other is so gradual that the cessation of the Devonian and the commence-

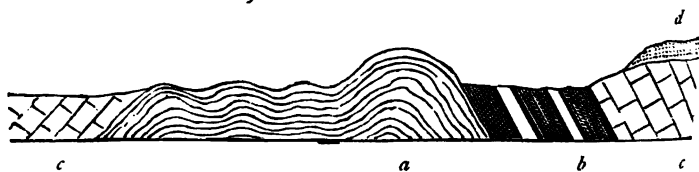
ment of the Lower Limestone shales can with great difficulty be determined. In this district the Devonian rocks attain a thickness of about 4000 feet.

The beds that are found in the Bristol Coal Field belong to what are called the Middle Devonian. On the north side of the Bristol Channel the Devonian beds are much more developed, and differ somewhat in their lithological character. They there attain a thickness of 6,000 feet, a large proportion of which is Cornstones and shales.

On looking at the geological map of Mr. W. Sanders, the Devonian is only met with in isolated patches, where the beds are upheaved towards the earth's surface, and afterwards denuded by the action of the water. The Bristol beds are probably an equivalent of the Scottish series, as seen in Perthshire and Forfarshire.

The first notice we have of the Old Red is seen resting on the Llandovery beds to the north of Tortworth.

FIG. 9.—*Section near Tortworth.*

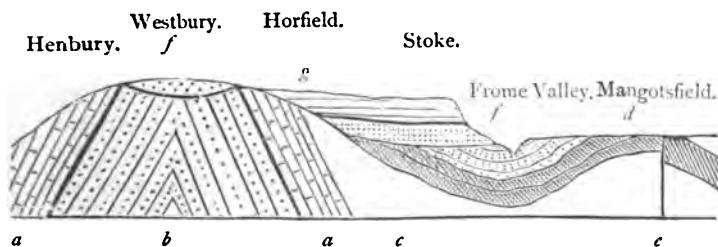


a Upper Llandovery.—*b* Wenlock and Ludlow.—*c* Devonian.—*d* Trias.

From thence it dips to the south towards the centre of the Gloucestershire Coal basin. On the east, as at Wickham, it does not come to the surface, because it is covered up by the Inferior Oolite and Lias. On the

west a much larger area of Devonian is seen, reaching to Thornbury. We then lose sight of it till we reach Westbury and Shirehampton, where an extensive anti-clinal ridge is thrown up, which reaches to Portbury.

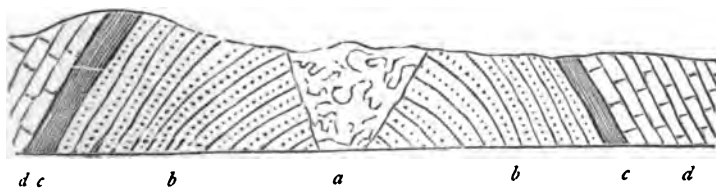
FIG. 10.—*Westbury Anticlinal.*



a Carboniferous.—*b* Devonian.—*c* Lower Coal Measures. --
d Pennant.—*e* Fault.—*f* Trias.—*g* Lias.

It is, however, at the south edge of the basin that we have the greatest local development of the Devonian beds, which attain a high altitude, forming the magnificent range of the Mendip Hills, the cause of this being a powerful upheaval of volcanic basalt (fig. 11.)

FIG. 11.—*Section near Downhead Common.*



a Basalt.—*b* Devonian.—*c* Lower Limestone Shales.—
d. Carboniferous Limestone.

The basalt of the Mendip range differs materially from that before mentioned as found at Damory Bridge. The former are more Basaltic, earthy, and ferruginous in their character. In some places the Ferric oxide is so abundant as to form concretions. The trap rock from Damory Bridge quarry is more crystalline, the central part being very hard and formed principally of Felspar and Hornblende, but interspersed towards the surface with veins of Calcite and Quartz. In many places the rock resembles Serpentine or Steatite. In others may be found Chlorite and Prehnite.

The following analyses of lava from the Mendips and Damory, taken from each place as typically as possible, show how great a difference there is in their chemical composition.

	Mendip.	Damory Bridge.
Silica	56.34	57.52
Alumina	9.76	16.52
Potassic Oxide	2.01	10.34
Sodic Oxide	3.04	.72
Calcic Oxide	10.33	4.60
Magnesian Oxide	5.62	5.14
Ferric Oxide	16.11	3.01
Manganetic Oxide	2.13	none
Loss ... ..	.66	2.15
	100.00	100.00

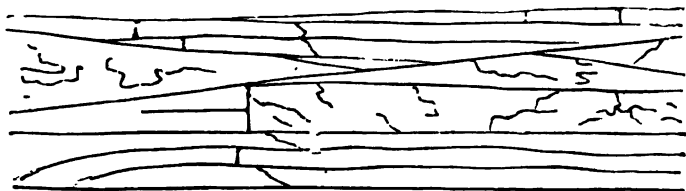
The beds of Old Red Sandstone form an exceedingly good building material, which will resist the weather without damage for many years. The church towers in many villages and towns in the county of Somerset are striking examples. From a small quarry on the bank of the Avon was obtained the stone with which the

buttresses of the Clifton Suspension Bridge were built.

At Portishead a very good section of the Old Red Conglomerate may be studied, on the shore near the hotel, at Woodhill Bay. It was here that Dr. Martyn found the scales of *Holoptychius*,* noticed for the first time in this locality. Since then scales of *Coccosteus*, *Fucoids*, &c., have been collected. Dr. Martyn's specimens were obtained from a bed of conglomerate that projects out of the shingle on the shore, but the bed has since been traced to its position in the rocks, as shewn in the following list of the beds. With the exception of this fish bed, there is a marked absence of fossils in the Devonian strata of this neighbourhood.

Below the Sea Mills station the beds have been much broken and turned over. The railway cutting at Hungroad is a complete illustration of the variety of physical characters with which the geological student often meets. One remarkable instance of false bedding is shewn in Fig. 12. In the same section may be seen some curious specimens of pseudo crystallization.

FIG. 12.—Hungroad Section, shewing irregular bedding.

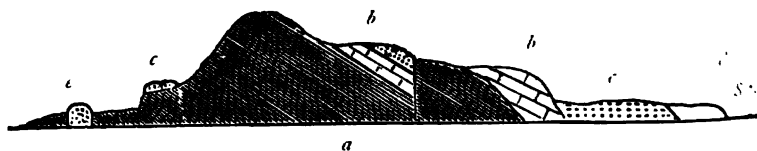


In the village of Portishead the ground has been

* The Rev. B. Blenkiron was the first discoverer of the *Holoptychius* there.

much broken up and disturbed by upheaval. The following section (Fig. 13) is in explanation of the complicated nature of the ground.

FIG. 13.—Section at Portishead.



a Devonian.—*b* Carboniferous.—*c* Trias.—*d* Alluvium.

The Devonian fossils found indicate a low marshy country, accessible to the encroachment of high tides. The comparative absence of marine mollusca supports the opinions of Professor Huxley, and the late Sir Charles Lyell, that the fishes of the Devonian period inhabited a swampy region, like the banks of the Nile, Gambia, and Senegal. In those parts of the world the *Polypterus* abounds, which has a great resemblance to the Devonian *Holoptychius*, *Osteolepis*, *Dipterus*, *Glyptolemus*, &c. It is singular too that all these belong to the *Crossopterygidae* or fringe finned fishes.

CARBONIFEROUS PERIOD.

THE CLIFTON SECTION.

THE grand and continuous section of the Carboniferous limestone shown at Clifton on the Gloucestershire side of the Avon, may be fairly taken as a summary of the whole group as seen in the counties of Gloucestershire and Somersetshire.

The junction of the Devonian with the Carboniferous rocks is complete, and the gradual passage through the Lower shales cannot be seen more conclusively or be more easily studied in any other locality.

The section commences with Devonian strata 360 feet thick, passing gradually through 500 feet of Lower Limestone shales, then through 2000 feet of Mountain Limestone, and finishing off with 400 feet of Upper Limestone shales and grits and 1000 feet of Millstone grit.

Every bed may be studied without any dangerous climbing, and with the greatest facility, and in order to facilitate the labours of those who may wish to pay a visit, and who may not be conversant with the locality, the following description, it is hoped, will be amply sufficient to supply the place of a guide. The number of feet indicate the vertical distance from the commencement of the section below Cook's Folly, taking the railway as the datum line, while the numbers of the several beds correspond with those on the diagram. As may easily be imagined, the catalogue of fossiliferous beds is so immensely long that only a few of the most interesting have been taken.

The Devonian beds that commence the first 360 feet of the section, are generally sandstone, containing Mica, but devoid of Carbonate of Lime and Fossils. At the distance of 327 feet are three remarkable beds of quartzose conglomerate 6 feet thick, divided by thin partings of purple and green marls. The pebbles are pieces of quartz which have had their angles completely worn away from long continued water action, and are probably the bed of an ancient river near the sea.

Thirty-three feet above the conglomerates is the first

bed that contain any appreciable quantity of lime, and may therefore be considered as the commencement of the true Carboniferous section. The junction of the Old Red and Carboniferous is so gradual that it is impossible to say where one ends and the other begins, but the junction beds may be included between the conglomerates and the bed now mentioned.

LOWER CARBONIFEROUS SHALES.

The figures within [] denote the number of feet from the commencement of Section.

1.—[360].—First bed with carbonate of lime in any quantity, and one foot thick.

2.—[385].—*Athyris Roysii* bed of very aluminous limestone 2 feet in thickness. Every part of the bed is crowded with fossils. The most characteristic are:—*Athyris Roysii* (Dav.), *Spirifera rhomboidea* (Phill.), *Retzia radialis* (Phill.)

[400].—Hard dark limestone 3 inches thick, resting on 12 inches of yellow marl. The stone is full of minute shells, probably the young of *Naticopsis* and *Rissoa*, and *Cytheridæ*.

3.—[408].—*Sanguinolites* shales. Greenish arenaceous shales, very fissile and with abundant and good casts of *Sanguinolites angustata* (Phill.) and *S. complanata* (Phill.) A good spot for collecting them is a few yards in the wood.

4.—[413].—*Modiola* shales. This is probably the most important bed of the Lower shales, for many of the fossils are identical with those of the Marwood, Coomhola, Moyola, and the Scotch Coal Measures, so

that they go far to support the idea of some of the Upper Devonian belonging rather to the Carboniferous period.* Another fact is that the whole of the beds are full of grass-like weeds similar to those of shallow sea shores, or rather to land at a low altitude which is periodically subject to the influence of high tides. Mixed with these plants are immense masses of the cast off valves of entomostraca.

5.—[433].—*Fenestella bed*. This is light coloured limestone about 1 foot thick, containing plenty of good specimens of *Fenestella flabellata* and other Bryozoa.

6.—[448].—*Bryozoa bed*. This very remarkable deposit is 8 feet thick, of dark red siliceous rock mixed with crystalline limestone. It is one mass of minute casts of fossils in a compound of silica and ferric oxide. They being insoluble in tolerably strong Hydrochloric acid may be easily separated from the lime. A very favourite method of preparing specimens is to suspend a piece of the rock in a beaker of acid till a portion has been dissolved, then removed and [dried. The fossils then appear all over the surface, standing out in the most beautiful manner. On gently washing the sediment in the beaker plenty of loose fossils may be obtained ready for the microscope. To give an idea of the immense number of organisms present in the rock more than one million and a half have been obtained from only one pound of stone. A description of the Bryozoa bed will be found in the Ann. Nat. Hist., 1861, p. 486. The chief bulk of the fossils are joints of the arms of Encrinites. All of them are very minute, the larger Trochi from the stems having been washed away, just as in a heap of pebbles, the larger

* For table of Fossils see Brit. Assoc. Rep. for 1864, p. 71.

ones roll to the bottom. So here we find the outside of the bank on the opposite side of the river. There we find the particles much larger, mixed with good sized *Productæ*, and sometimes the tooth of a *Psammodus* or *Cladodus*.

The following are fossils that are always present, and may be obtained at any time :—

Ceriopora rhombifera (Goldf.); *Platycrinus lævis* (Mill.); *Poteriocrinus isacobus* ? (Aust.); *Leperditia Okeni* (Munst.); *Cypridina ovalis* (Stod.); *Cytherella lunata* (Stod.); *Naticopsis plicistria* (McCoy.), (Young.); *Productus* (Sp. ?); *Spirorbis triangulatus* (Stod.); *Psammodus porosus* (Ag.); *Cladodus conicus* (Ag.)

7.—[453].—*Palate bed*.—This is a breccia 5 feet above the Bryozoa bed, full of fish teeth and coprolites with shells, &c. Very good specimens may be easily obtained, especially from weathered portions. When seen in a freshly made section of the rock, this palate bed has a greyish brown colour, but on exposure to the air it soon changes into a dark reddish brown from oxidation of the iron. The bed is three or four inches in thickness, and lies on eighteen inches of greyish marl. The principal fossils are :—

Discina nitida (Lam.); *Lingula mytiloides* (Dav.); *Naticopsis plicistria* (McCoy.); *Conularia quadrisulcata* (Mill.); *Loxonema rugifera* (Phill.); *Cladodus conicus* (Ag.); *Chomatodus linearis* (Ag.); *Helodus levissimus* (Ag.); *Psammodus porosus* (Ag.), *rugosus* (Ag.).

8.—[494].—*Camarophoria bed*.—This is a 6 inch dark coloured bed of limestone containing in great numbers—

Camarophoria globulina (King.); *Athyris Royssii* (Dav.), *lamellosa* (Dav.); *Retzia radialis* (Phill.);

Naticopsis plicistria (McCoy.); *Spirifera duplicicostata* (Dav.).

9.—[506.]—*Buchiana bed* is one of grey limestone from 12 to 20 inches in thickness, and is one mass of mollusca cemented together with carbonate of lime. Very perfect specimens with the shell may be easily obtained in great numbers and perfection. The following fossils are the most common in a very long list obtainable in this spot.

Choneles Buchiana (Dav.), *sordida* (Sow.), var. *perlata*, *Papilionacea* (Kon.); *Orthis resupinata* (Mart.); *Streptorhyncus crenistria* (Dav.), var. *arachnoidea* (Dalm); *Sanguinolites transversa* (Portl.)

10.—[520.]—*Pleurodon bed*.—This is marked out on account of containing *Rhynchonella pleurodon*, which is not found in the Clifton rocks so abundantly as in the Derbyshire and many other limestones. The two chief fossils are:—*Rhynchonella pleurodon* (Fisch); *Cladodus conicus* (Ag.)

11.—[535.]—*Fenestella bed*, so called from the remarkable abundance of bryozoa that are found in it. Excellent specimens may be collected on the railway bank, where the little branched polypidoms attract the eye, standing out in relief on the weathered slabs of limestone. From this bed also are collected the heads of *Encrinites* in a good state of preservation.

Ptylopora pluma (McCoy), *flustraformis* (Phill.); *Fenestella flabellata* (Lonsd.), *irregularis* (Phill.), *polyporata* (Portl.), *membranacea* (Lonsd.); *Relepora prisca* (Lonsd.); *Ceriopora interporosa* (Goldf.), *rhombifera* (Gold.); *Streptorhyncus crenistria* (Phill.); *Orthis resupinata* (Mart.); *Encrinites* (various).

12.—[639.]—*Trilobite bed*. This limestone is very

rich in the Phillipsia, of which only the pygidia will probably be found. The pretty little *Chonetes perlata* or as it is sometimes called *C. Hardrensis* is very plentiful. A good spot for this bed is on the top of the hill where it crops up at the back of Avonhirst house, Sneyd Park. Although varieties of the same trilobite, yet the difference as pointed out in Portlock's report on Tyrone, &c., are so marked that the names are retained as a guide to the visitor.

Phillipsia pustulata (Schlot.), var. *Brongniarti* (Fisch.), var. *seminifera* (Phill.); *Chonetes sordida* (Sow.), var. *perlata* (Phill.).

13.—[639.]—*Oracanthus bed*. This is another of our well marked Clifton beds of fossils. It is about a foot thick, and is extremely rich in Brachiopoda and the sculptured defensive spines of *Oracanthus*. The best opportunity for examining it was a short time ago when an excavation was being made for a house in Sneyd Park, on the road to Stoke Bishop. The limestone weathers easily, and being rather argillaceous the various specimens are more easily and perfectly separated from the matrix than they generally are. The collector should look out for *Rhynchonella acuminata* and *Spirifera Mosquensis*, which are great rarities.

Oracanthus pustulatus (Ag.), *Millerii* (Ag.), *minor* (Ag.); *Terebratula hastata* (Sow.), var. *ficus*, (McCoy.) v. *sacculus* (Mont.), v. *vesicularis* (De Kon.); *Rhynchonella acuminata* (Sow.); *Spirifera Mosquensis* (Dav.), *glabra* (Dav.), *duplicicostata* (Dav.), *Streptorhynchus crenistria* (Dav.), v. *arachnoidea* (Dalm.); *Strophomena analoga* (Phill.), *Orthis resupinata* (Mart.); *Cypricardia rhombea* (P. Mus. G.), *parallela* (Phill.); *Capulus vetustus* (Montf.); *Euomphalus Dionysii* (Goldf.).

14.—[668.]—*Spirifer bed*. This bed is instantly recognised by the abundance of fine specimens of *Spirifera striata* that occur. It is several feet thick and very dark in colour, and is the last illustrative bed of the true Lower Carboniferous Shales that we shall notice. It must not however be supposed that the intervening strata are unfossiliferous. On the contrary the whole of the set of beds is extremely rich, especially in Brachiopoda, so much so that it is extremely difficult to select any special ones. The one now under consideration may be recognised as the commencement of the Black Rock Quarry, and contains chiefly—

Psammodus porosus (Ag.); *Spirifera striata* (Dav.), var. *attenuata*, *cuspidata* (Mart.); *Producta punctata* (Mart.), *pustulosa* (Phill.); *Athyris Royssii* (Dav.).

MOUNTAIN LIMESTONE.

It is difficult and arbitrary to draw any line of demarcation in the Clifton section, so gradually does one part pass into the other. We have, however, for convenience of description, commenced the massive mountain limestone with what is locally known as the Black Rock Quarry. It is so named from nearly all the beds being very dark in colour, from the presence of bitumen, which sometimes is so plentiful as to give an unpleasant odour to the limestone, especially when rubbed, and sometimes is found as a liquid in small cavities. The quarry is an extensive one, being 770 feet in length, and nearly 300 feet in height. The dip of the beds varies from 20° to 30° to the S.S.E. They are famous, both in this country and elsewhere, for the remains of gigantic fishes that once swarmed in the water of the old carboniferous ocean. Our Museum contains a fine collection of

typical specimens, the originals of many of the figures in the large work of Agassiz on fossil fishes. The strata in this quarry are extremely regular and uniform. At the top of the eastern extremity is a singular deposit of cherty ironstone, which appears to have been the result of decomposition. It is full of vacuoles, as if caused by the escape of gases, but no trace of fossils can be seen.

[899].—*Encrinite Beds*.—These attain a thickness of 112 feet, and constitute a very large part of the quarry. The stone is one complete mass of the stems, arms, and heads of those exquisitely beautiful echinoderms, the sea lilies. The stone, when polished, shews the forms in the most perfect manner, and are very favourite specimens and in great request for ornamental work. In the centre of these Encrinital Beds is one in which the largest specimens of Trilobites have been found. It is singular that in this one layer there should have been so many, when they are absent in the others. Nearly all the species of Encrinites yet found have been noticed in this spot.

Agathocrinus planus (Mill.); *Dichocrinus radiatus* (Aust.); *Poteriocrinus conicus* (Phill.), *crassus* (Mill.), *isacobus* (Aust.), *plicatus* (Aust.), *pentangularis* (Mill.), *tenuis* (Mill.), *rostratus* (Aust.); *Rhodocrinus costatus* (Aust.), *granulatus* (Aust.), *verus* (Mill.); *Platycrinus granulatus* (Mill.), *levis* (Mill.), *rugosus* (Mill.), *striatus* (Mill.), *trigintidactylus* (Aust.); *Actinocrinus triacontadactylus* (Aust.).

15.—[961].—*Fish beds*.—At this spot are three beds, so remarkably uniform in thickness and parallelism as to be strikingly noticeable to anyone passing, and, therefore, form a capital guide to this wonderful deposit

of Ichthyodorulites. The defensive spines of *Ctenacanthus* sometimes attain a length of 20 inches or two feet. These formidable weapons formed part of the dorsal fins of immense sharks, with grinding teeth like those now found near Port Jackson, in Australia. In consequence of these fishes being cartilaginous in their structure, only these spines and the teeth have been preserved, the soft portions having probably disappeared.

The following is a list of fossil contents:—

Cladodus conicus (Ag.), *Milleri* (Ag.), *mirabilis* (Ag.); *Deltoptychius acutus* (Ag.); *Tomodus convexus* (Ag.); *Chomatodus cinctus* (Ag.), *linearis* (Ag.); *Cochliodus contortus* (Ag.); *Ctenacanthus brevis* (Ag.), *major* (Ag.), *tenuistriatus* (Ag.); *Helodus gibberulus* (Ag.), *lævissimus* (Ag.), *subteres* (Ag.), *turgidus* (Ag.); *Onchus hamatus* (Ag.), *sulcatus* (Ag.); *Oracanthus Milleri* (Ag.), *minor* (Ag.), *pustulosus* (Ag.); *Orodus cinctus* (Ag.), *ramosus* (Ag.); *Psammodus porosus* (Ag.), *rugosus* (Ag.).

A long series of interesting beds follow to the end of the quarry, and terminate in a deep ravine leading to the summit of Durdham Down, near what is called the Sea Wall, from which a magnificent panorama is beheld, comprising the fine anchorage ground of Kingroad, backed up by the Welsh hills.

It is on the side of this ravine that a botanical rarity may be gathered, *Grimmia orbicularis*, a round-fruited moss.

On passing the opening of this ravine, we come to a singular series of beds, 167 feet in thickness, of oolitic limestone, so full of false joints as to give the beds the appearance of having a vertical position, although they really dip 30°. The oolitic structure is extremely fine, each granule having in its centre a minute speck of

sand. A great number of microscopical examinations have been made, but have hitherto failed in finding any organic nucleus. On passing these, we come to more regular beds, containing fossils, but only stay to notice one (16).—[1433], having a brown colour, situated 44 feet above the oolitic strata just mentioned, and is entirely composed of myriads of the valves of *Terebratula hastata*, and 6 inches thick.

17.—[1526].—*Aranca bed*, or grey limestone, full of the *Lithostrotion aranea*. The delicate web-like tracery of the septa are shewn very distinctly. It contains a small branched coral whose name has not been definitely determined.

Lithostrotion aranea (Edwds.), *irregulare* (Edwds.), *junceum* (Edwds.); *Producta punctata* (Mart.).

We now come to the Great Quarry, another extensive section, 1185 feet long, and the same height as the Black Rock. Here the limestone is generally lighter in colour, and, in some places, very bituminous. Between the limestone beds we frequently find cubic crystals of the Fluor Spar. At the western end is a very singular fracture of the beds by subsidence. During the progress of deposition, a portion has evidently been washed away, letting the superincumbent roof of five or six beds fall in; this was evidently not a recent occurrence, because the subsequent thickness of some 200 feet was afterwards regular, and shows no sign of disturbance.

18.—[1539].—*Longispinosus bed* occurs about 15 feet before the commencement of the Great Quarry. It is a smooth, thin, and argillaceous bed, completely covered with Trilobites, a *Productus* with very long spines, Bryozoa, and other organisms!

Producta longispinosa (Sow.); *Phillipsia pustulata*

(Schloth.); *Cerriopora rhombifera* (Goldf); *Lithostrotion junceum* (Edw.); *Entomostraca*; *Foraminifera*.

19.—[1552].—*Euomphalus bed* is one of the first beds of solid limestone with which we meet in the quarry. It is a rather light coloured limestone, and very fossiliferous, and contains some good specimens of *Euomphalus* and *Producta*.

Euomphalus nodosus (Sow.), *calyx* (Phill.); *Producta Martini* (Sow.), *Cora* (D'Orb.); *Rhynchonella acuminata* (Sow.).

20.—[1617].—*Portlocki bed* is full of the beautiful astreiform corals in brown limestone, a section cut from any part is an equally good example.

Lithostrotion Portlocki (Edwds.); *Cyathophyllum regium* (Phill.), *turbinatum* (Sow.); *Michelinia tenuisepta* (Goldf.).

21.—[1620].—*Cyrtina bed* contains good specimens of *Cyrtina septosa* (Dav.); *Spirifera lineata* (Mart.).

[1849].—Here we come to the end of the quarry, and arrive at the new zigzag path from Clifton Down. At the top of this, on the Durdham Down side, may be taken good examples of *Phillipsia*, although not plentifully distributed. On the edge of Clifton Down, at the top of the road, is an interesting three inch black bed, which is only here exposed, which we name the

22.—*Bellerophon bed*. This limestone is noticeable for allowing the fossils to come away in a perfect state by a blow of the hammer, so that no occasion exists for carrying home a large piece of the matrix, as is usually unavoidable.

We now arrive at one of the great points of interest in the Clifton rocks, viz., the remains of a former coral reef. Throughout the next 1290 feet the rocks are

entirely filled with the most lovely forms of Zoanthidæ, which, from their large size, must have thriven in the greatest luxuriance in the warm waters of the ancient carboniferous sea. Here may be seen tons of Cyathophyllidæ, three inches in diameter, and of proportionate length with the tiny *Alveolites* and *Syringopora*, surrounded with the washings of the waves and the entomostraca that usually inhabit such localities. Indeed, here may be exhibited the natural history found at the bottom of a tropical sea.

23.—[1859].—*Aulophyllum bed*, is a reddish-brown limestone with

Aulophyllum fungites (Edwds.); *Clisiophyllum coniseptum* (Keys.); *Lithostrotion concinnum* (Edwds.); *Cyathophyllum regium* (Phill.).

24.—[1892].—*Ellipsolithes bed* is a thin bed, and is the chief locality in which we can get

Ellipsolithes compressus (McCoy.); *Euomphalus tuberculatus* (Thor.).

25.—[1897].—*Vesicularis bed* is a good one for this variety of *Terebratula hastata*, of which it is probably the young.

26.—[1901].—*Chætetes bed* is the source of splendid examples of the *Chætetes radians*. They are very large, and the sections, when polished, are exceedingly handsome. In the other beds the specimens are not nearly so fine.

Chætetes radians (Flem.); *Lithostrotion irregulare* (Edwds.).

27.—[1908].—*Comoides bed* is a black oolitic limestone, containing a great number of

Chonetes comoides (Fisch.); *Orthoceras Sp?*; *Producta Cora* (D'Orb.); *Alveolites septosa* (Edwds.).

[1910].—Another bed, similar to the last.

28.—[1916].—*Zaphrentis bed* is a dark coloured limestone, with very fine examples of *Zaphrentis Griffithsi* (Edwds.); *Amplexus coralloides* (Sow.); *Conocardium giganteum* (McCoy.).

29.—[1944].—*Gigantea bed*, so called from the enormous specimens of *Producta gigantea* found in a dark oolitic limestone.

30.—[1946].—*Foraminifera bed* is a good example of the fossil bed of an ocean. It is almost entirely made up of small foraminifera, shell-debris, echinus-spines, &c.

31.—[1948].—*Irregulare bed* is a red limestone bed, very siliceous, and one mass of *Lithostrotion irregulare*.

32.—[1961].—A bed of limestone, containing very large specimens of *Euomphalus tuberculatus*, some of them being four inches in diameter.

33.—[1968].—*Coral beds*. These are the principal coral bearing beds of the section, and contain a greater part of all the known species occurring in the locality.

Cyathophyllum regium (Phill.), *Stutchburyi* (Edwds.), *Murchisoni* (Edwds.); *Lithostrotion ensifer* (Edwds.), *Martini* (Edwds.), *basaltiforme* (Edwds.), *junceum* (Edwds.), *Lonsdaleia floriformis* (Edwds.), *Aulophyllum fungites* (Edwds.); *Alveolites depressa* (Edwds.); *Clisiophyllum coniseptum* (Keys).

34.—*Plant bed*. This is a dark coloured oolitic bed, containing coal plants, with a large number of *Lithostrotion irregulare*.

35.—Is a light brown limestone, with very fine masses of *Cyathophyllum regium*.

36.—*Stigmara bed*.

37.—*Murchisonia bed*. This, though disturbed, is

evidently a continuation of the upper limestone series. It contains many univalves, which have, by many, been thought doubtful as Clifton specimens. It is a dark semi-crystalline limestone passing into one having a lighter colour. The fossils are very distinct from those found in previous beds.

Murchisonia angulata (Phill.); *Platyschisma tiora* (McCoy), *Jamesoni* (McCoy); *Naticopsis variata* (Phill.), *spirata* (McCoy.); *Loxonema rugifera* (Phill.); *Bellerophon apertus* (Sow.); *Conularia quadrisulcata* (Mill.); *Sedgwickia centralis* (McCoy.).

38.—*Orthoceras bed* contains weathered encrinites, and imperfect specimens of a large orthoceras.

39.—[2260].—*The Great Fault*, very properly so named, and is well worthy of a visit from every one studying the Clifton rocks. This spot bears most evident testimony to the great convulsive power that nature sometimes puts into action, Through the distance of 1090 feet, the ground is distorted and broken up in the utmost confusion, and the rocks twisted and overturned. The strata has been displaced to the extent of 800 feet, vertically. One side upheaved, the other depressed and at the same time lateral pressure completed the destruction. Beds of coal mixed with millstone grit are side by side with mountain limestone, while the 500 feet of upper shales have been, as it were, buried out of sight, and the Avon gorge riven asunder. All these are open to the eye of the observer of the present day. So great was the disturbance of the country, that one half was turned one-fourth of the whole compass; the beds below the Great Fault dip to the S.S.E. 30°, while those above the Great Fault dip to the N.E. 70°. At the entrance to the tunnel, near the Clifton Station, coal

beds may be seen, which have been buried 300 feet in the ground, while the same beds have, since that time, been entirely removed by denudation from the surface of the higher ground in the immediate neighbourhood. Complete evidence of lateral pressure may be seen by the curling of the marls and shales as they were forced against the massive beds of the St. Vincent's Rocks, which are only a repetition of the mountain limestone before described.

40.—A bed of gray limestone, containing *Terebratula hastata* (Sow.); *Syringopora geniculata* (Edw.).

41.—A bed of limestone, containing *Producta* and *Rhynchonella pugnus*.

42.—*Syringopora* bed. A bed of limestone, containing the following corals. The last three beds are repetitions of those near No. 33.

Alveolites septosa (Edw.), *depressa* (Edw.); *Chaetetes radians* (Flem.); *Syringopora reticulata* (Goldf.), *lamellosa* (Edwd.), *geniculata* (Edwd.); *Lithostrotion junceum* (Edwd.), *affinis* (Edwd.); *Ptylopora frustraformis* (Phill.).

Near this spot, and a few feet before the next mentioned bed, is the long-famed Hotwell Spring, the water of which issues at the rate of 60 gallons per minute, at a tolerably uniform temperature of 70° Fahr. When freshly drawn, it is full of bubbles of Carbonic Dioxide and Nitrogen Gases, of which the late Mr. Herapath estimated that each gallon contained nearly 16 cubic inches. According to that chemist, analysis shewed that the water contained

Chloride of Magnesium	-	-	-	2'180
Nitrate of Magnesium	-	-	-	2'909
Chloride of Sodium	-	-	-	5'891
Sulphate of Sodium	-	-	-	3'017
Sulphate of Magnesium	-	-	-	1'267
Carbonate of Calcium	-	-	-	17'700
Carbonate of Magnesium	-	-	-	'660
Carbonate of Iron	-	-	-	'103
Bitumen	-	-	-	'150
Sulphate of Calcium	-	-	-	9'868
Silica	-	-	-	'270

Total solid contents per gallon - 44'015 grains.

43.—[2675].—*Solenopsis* bed. It is now difficult to examine because it is not worked. It contains, however, many small corals, bivalves and univalves. The principal fossil is the *Solenopsis minor*, which is tolerably plentiful and in good preservation.

44.—*Rhynchonella* bed. This is a good fossiliferous bed, behind the Colonnade, and crops out again near the south buttress of the Suspension Bridge. The specimens of *Producta* and *Euomphalus* are larger here than in any other part.

Rhynchonella pugnus; *Producta gigantea*; *Euomphalus tuberculatus*; *Sanguinolites angustata*; *Myacites tumidus*.

45.—*Foraminifera* bed. Although five good beds are known, yet this one is perhaps the best. It is oolitic in its structure, the granules being white, in a reddish-brown matrix. It is impossible to cut a slide for the microscope without having three or four species of foraminifera on it. Almost every granule has for its nucleus a foraminifer or minute shell. Among others have been noticed the following:—

Cristellaria; *Nonionina*; *Assilina*; *Rotulina*; *Globi-*

AM OF

Quarry



to 25° Fish beds

roken S. E.



36 37 38 46 47 48

Millstone Shales

Lavars,

11-11-11

1

11-11-11

1

1

11-11-11

gerina ; *Bigenerina* ; *Dentalina* ; *Textularia* ; *Cornuspira* ; *Bulimina* ; *Nodosira*.

46.—Is a bed with abundance of *Terebratula hastata*.

47.—*Stutchburyi bed*. This is a very thick bed of brown limestone, full of larged sized corals, sufficiently perfect for the observation of all their anatomical details.

Cyathophyllum Stutchburyi (Edwd.), *regium* (Phill.) ; *Campophyllum Murchisoni* (Edwd.) ; *Lonsdaleia fliformis* (Edwd.) ; *Lithostrotion Martini* (Edwd.), *carnea* (Edwd.), *McCoyanum* (Edwd.).

48.—*Convoluta bed* is a reddish sandy limestone, very full of fossils, among which are *Spirifera convoluta* or *rhomboidalis* (Phill.) ; *Cyrtina septosa* (Dav.) ; *Producta Martini* (Sow.), *longispinosa* (Sow.) ; *Pinna*, sp ? ; *Pecten*, sp ? ; *Cochliodus contortus* (Ag.).

The five last beds are hidden by the houses, so that the examination must either be conducted by going through the gardens, or by finding them on the opposite side of the river.

On these lie the upper limestone shales, which are extremely sandy in their character, giving rise to the name of "Upper Grits." They are about 400 feet in thickness. They are not so rich in fossils as the other parts of the Clifton section, although 52 species have been noted.

[3045].—This is the last of the Upper Shales, just below the commencement of the Millstone Grit or farewell rock, the first bed of which may be seen behind the General Draper Inn. These beds are highly charged with Hematite. In some places the Ferric oxide is found as an amorphous deposit, containing from 40 to 50 per cent. of metallic iron. It is, however, much mixed with silica, which consequently detracts from its value.

THE MILLSTONE GRIT

Now succeeds. In the district it attains the thickness of about 1000 feet. It is extremely hard and siliceous, forming a paving stone more highly prized for road mending than even the Greenstone from North Wales. It is generally very unfossiliferous, but Major Austin found a locality from which he obtained a long list of very perfect casts of mollusca.

COAL MEASURES.

Notwithstanding the economical importance of these beds, we can give but a meagre outline of them, since the space at our disposal is so small; however, in the handy little work of Mr. J. Anstie, C.E.,* who, from his labours on the Coal Commission, enjoyed exceptional advantages, the reader will find a most useful epitome of the measures, and their exposures in the different parts of the district, together with a selection of horizontal and vertical sections which illustrate many interesting points.

If there is anything remarkable about the coalfield as a whole, it is the large proportion of it which is hidden by overlying rocks; the figures given in the official enquiry are as follows†:—(a)—Portion of exposed coal measures, 48 square miles. (b)—Portion of coal measures covered by and worked under the newer formations, 40 square miles. (c)—Portion of coal measures covered by the newer formations and not yet

* "The Coalfields of Gloucestershire and Somersetshire and their resources" (1873).

† Report of the Coal Commission, vol. I, p. 36 (1871).

worked, 152 square miles. Hence it appears that of the worked portion, the hidden part from which coals are won, is almost as large as the exposed area; while, including the unproved portion, the area covered by newer formations is four-fifths of the whole. The total area of coal measures amounts to 240 square miles, while the area of Mr. Sanders's map is only 720. Hence it appears, according to the authorities who report for the Coal Commission, that there is a large proportion of the field still untouched. Taking the annual output at 1,000,000 tons, there is said to be enough coal left, at a less depth than 4000 feet, to last for 4219 years. (Report, p. 52).

The coal measures of this district are divided into three groups of beds:—(1)—The Lower coals; (2)—the Middle or unproductive portion, consisting mostly of sandstone, and, as in South Wales, called "Pennant"; (3)—the Upper coal measures. The average thickness of these divisions may be taken as follows:—Lower series, 2600 feet; Pennant sandstones, 1800 feet; Upper series, 2600 feet. It will be convenient to consider these in order. Professor Hull* reckons, in the whole coalfield, 20 seams of 2 feet thickness and upwards, giving a coal section of 70 feet; as a matter of fact, however, many seams of a less thickness than two feet are worked.

LOWER SERIES.

The Lower coals occur to the north, in the Cromhall District, evidently lying upon the Millstone Grit. Where this rock is covered up at Yate by Secondary

* "The Coal Fields of Great Britain, their history, structure and resources," p. 114 (3rd edition, 1873).

rocks, they disappear too under the same. At Cromhall they only contained two workable seams—the colliery is abandoned—but further south they become more productive. In the Kingswood District the seams are more numerous, about 25 different seams may be reckoned, some being worked in one pit, and some in another. For the description of the anticlinal which exists in this district, we must refer to other sources, suffice it to say that it extends in an east and west direction from St. George's, through Holy Trinity, the axis consisting of coal measure sandstone (once thought to be Millstone Grit), from which the Lower coals are thrown off on each side with opposite dips; the matter is further complicated by two sets of faults—owing to an east and west fault, many of the coals which should crop out on the north side are faulted out, and do not appear on the surface.

The Lower series constitute chiefly the coals of the Nailsea field (there is some coal in the Pennant there) and is about 450 yards thick; they contain also those worked in the Nettlebridge Valley. There are here some 15 to 20 seams, varying from two to six feet.* but they are much disturbed, owing to their being so close to the Mendips; the coal beds have suffered much from elevatory action, being sometimes vertical, at other times bent double and reversed. Other results of this movement are the fiery nature of some of the collieries, and the broken character of some of the coals.

Of the Fossils of this division our list is an incomplete one, and the remains are confined to the Plant kingdom as far as we know. It is unfortunate that many speci-

* Messrs. G. C. Greenwell and J. McMurtrie "On the Radstock portion of the Somersetshire Coalfield," p. 19 (1864).

mens of the fine collection of coal plants in the Bristol Museum have no exact locality on them; it is very desirable that collectors should put the locality at once on every fossil, whether from the coal or elsewhere, they would then be contributing towards a knowledge of the Fossil flora and fauna of the neighbourhood. In the Mendip coal district we are told that there is scarcely anything besides *Stigmara*.* It has been said that the Lower series in our district produce no fossil ferns, but this is too sweeping a statement. Mr. Anstie mentions *Alethopteris*, *Lepidodendron*, and *Calamites* in the roof of the "hard seam" at Yate. We give the following list of species, which we obtained from a miner, in the last year or so, from the Golden Valley and Warmley Pits:—

Pecopteris oreopteridis (Schl.), *Cistii* (Br.), *æqualis* (Br.), *abbreviata* (Br.), *Miltoni* (Br.); *Alethopteris lonchitica* (Sternb.); *Neuropteris heterophylla* (Br.); *Sphenopteris irregularis* (Br.); *Sigillaria scutellata* (Br.).

MIDDLE SERIES OR PENNANT.

This is well seen as a continuous section along the course of the Avon, at Conham and Hanham; its thickness here is estimated at 1800 feet. There must be a considerable thickness of it on the south of the Somersetshire coalfield, between the Farringdon Gurney coals and those of the Mendip area—Mr. Anstie estimates it (*loc. cit.*, p. 68) as possibly 2700 feet thick there. The Pennant contains one or two coal seams in places, e.g., the "cock," "hen," and "chick" seams have been worked in the base of the Pennant, the crop of one is seen by Mangotsfield Station; again, coal is

* Messrs. Greenwell and McMurtrie (*loc. cit.*, p. 20).

seen in the railway cutting near Keynsham. In the Nailsea District "Grace's seam," three feet thick, was worked in the Pennant. The sandstone is largely quarried for building purposes and street flags, both near Bristol, and again near Clevedon Court, where the beds are brought in by a grand fault against the Mountain limestone. The chief fossils in the Bristol Museum from the Pennant are:—

Stigmaria ficoides (Br.); *Knorria imbricata* (Sternb.); *Ulodendron majus* (L. & H.); *Calamites approximatus* (Br.), *cannæformis* (Schl.), *Suckovii* (Br.).

The sandstone is frequently full of carbonaceous patches, apparently the fragmentary remains of plants, whose structure has not been preserved in the sandy matrix.

UPPER COAL MEASURES.

The Upper series are subdivided into two minor groups of seams, separated by dead ground 500 to 700 feet thick, in the middle of which occurs a mass of red shale (250 feet). Above this portion of unproductive strata are the Radstock seams, while below is the Farringdon group.

The Farringdon group in Somersetshire contains about six seams, from $1\frac{1}{2}$ to 3 feet thick. The centre of the field, north of Bristol, round Coalpit Heath and Westerleigh, consists of this part of the Upper series, the Radstock seams being absent there. Four coals are here worked, one of which is the "Hollybush," 3ft. thick.

The Radstock group generally consists of six workable seams, from 14 to 30 inches thick; they are contained usually in about 480 feet of beds, the local

names for these seams are, beginning below, "Bull" seam, "Under Little," "Slyving," "Middle," "Top little," and "Great" seam (2ft. 3in.). The measures being covered up under New Red, Lias, or Oolite, the pits have to be sunk through these before reaching the coal; but their depth is slight as a rule compared to those in the North of England; the deepest in Somersetshire is that of Braysdown, 570 yards. In this last, and at the Old Grove Pit (Timsbury), the shafts were sunk through both groups of seams, which were distant from each other 750 feet and 500 feet respectively. The Radstock District contains a very remarkable slide or overlap fault, with a vertical throw of 36 fathoms,* and which displaces the seams unequally in a horizontal direction, viz., the top seam for 100 yards, and the lowest seam over 300 yards; the effect of this fault is that the same seam may be sunk through twice in the same shaft.

A noteworthy fact, about the Radstock District, is the smallness of the seams that are profitably worked; this is no doubt largely due to the distance of the more northern coal districts and consequent heavy freights, but also in part to the general absence of fieryness in the seams.

The Fossils, as in the Lower series, are almost entirely confined to plants. In the Bristol Museum there are no examples of Vertebrata—none of the Fish which occur in some of the north-country beds, no remains of Amphibia, which have been attracting so much attention of late; Mollusca even are scarce, and none are to be seen in the collection from our District.

* Messrs. Greenwell and McMurtrie (*loc. cit.*, p. 17).

On the other hand the Ferns from the Radstock District are magnificent. Coalpit Heath also produces fine specimens, if only miners could be induced to collect. The following are some of the chief forms:—

Pecopteris plumosa (Br.), *arborescens* (Schl.), *abbreviata* (Br.), *Miltoni* (Br.), *dentata* (Br.), *aspidioides* (Br.), *Bucklandi* (Br.); *Alethopteris Serlii* (Br.), *Mantelii* (Br.); *Neuropteris acuminata* (Br.), *flexuosa* (Br.); *Sphenopteris adiantoides* (L. & H.), *artemisiæfolia* (Sternb.); *Sphenophyllum Schlotheimi* (Br.); *Annularia longifolia* (Br.); *Calamocladus equisetiformis* (Schl.); *Calamites canna-formis* (Schl.), *Suckovii* (Br.), *Cistii* (Br.), *approximatus* (Br.); *Trigonocarpon Dawesii* (L. & H.); *Sigillaria lævigata* (Br.), *flexuosa* (L. & H.), *elongata* (Br.), *tesselata* (Sternb.), *reniformis* (Br.), *ornata* (Br.); *Caulopteris primæva* (L. & H.), *Phillipsi* (L. & H.); *Lepidophloios laricinum* (Sternb.); *Lepidodendron obovatum* (Sternb.), *aculeatum* (Br.), *longifolium* (Br.), *rimosum* (Sternb.); *Lepidostrobos lepidophyllaceus*; *Ulodendron punctatum* (L. & H.).

NEW RED PERIOD.

It has been frequently supposed that the Permian exists in the neighbourhood of Bristol, the so-called "Magnesian Conglomerate" being supposed to be of that age. This was the position assigned to the conglomerate by Buckland and Conybeare.* Riley and

* Dr. Buckland and the Rev. W. Conybeare, "Observations on the South-Western Coal District of England."—Trans. Geol. Soc. 2nd Ser., vol. i., p. 231 (note). 1824.

Stutchbury* referred it to the lower part of the Red Marl of Yorkshire, and parallelize it with the Thuringian beds (Permian). Sir H. de La Beche† however, remarks (1846) that the conglomerate "may have been of different dates though included in the period during which the new red sandstone series was deposited." Again Professor Ramsay‡ says (*ibidem* p. 318), "It has been shown by Sir H. De La Beche that the Magnesian Conglomerates encircling the Mendip Hills in the neighbourhood of Bristol, on the southern skirts of Glamorganshire and elsewhere, do not universally underlie the entire formation of the New Red Sandstone as an independent system of rocks of a given age, but are in fact of all ages appertaining to that formation as known in these counties, and once formed part of the shingly beaches of the New Red Sandstone, on the margin of the coast of the recently waterworn land." From the labours and publications of the Geological Survey the correct knowledge of the position of these beds takes its rise. Mr. W. Sanders, F.R.S., who worked out most of the observations in this district and presented them to the Survey, brought the matter before the British Association in 1849,§ and showed that the

* Dr. Riley and S. Stutchbury, "A description of various fossil remains of three distinct Saurian animals recently discovered in the Magnesian Conglomerate on Durdham Down, near Bristol."—*Trans. Geol. Soc., 2nd. Ser., vol. 5, p. 397 (1840).*

† Sir H. De La Beche, "On the Formation of Rocks in South Wales and South-Western England."—*Mem. Geol. Survey Great Britain, vol. i., passim, p. 240. (1846).*

‡ Professor A. C. Ramsay, "On the Denudation of South Wales and the adjacent counties of England."—*Mem. Geol. Survey, vol. i., p. 297, 335. (1846).*

§ Mr. W. Sanders, F.G.S., "On the age of the Saurians named

conglomerate occurred at different levels in the New Red; e.g., in the parish of St. George's, near the mouth of the Avon, and again in the three parishes of Compton Martin, and West and East Harptree, "the spaces coloured on the Ordnance map as conglomerate, are really composed of several small tracts of conglomerate at different elevations, separated by larger tracts of tranquilly deposited clays, marls and sandstones, similar in all respects to those which all concur in marking as the upper part of the New Red Sandstone" (*loc. cit.* p 66). The age of this conglomerate, because of the interesting remains of extinct reptiles found in it, has received much attention, both at the time of their discovery and again quite recently, when their affinities have been re-discussed. Mr. Sanders's argument seems to be that from the relative height at which the different patches of conglomerate occur we may deduce their comparative age in the New Red, "that the order of succession presented by the strata accumulated on the slopes of the hills correspond with the order of time at which they were formed" (p. 66). The age of the particular mass on Durdham Down containing the *Thecodontosauri* from its height above the sea level, 300 feet, while other similar deposits a mile off are 100 and 150 feet lower,—is unhesitatingly referred to the latest times of the New Red. Little objection can be taken to this reasoning.

The age of the Magnesian Conglomerate in the Bristol area has been lately discussed by the Palæontologist to the Survey,* who at the beginning of his essay *Thecodontosaurus and Palæosaurus*.—Brit. Assoc. Rep., xix, p. 65, 1849.

* Mr. R. Etheridge, F.G.S., "On the Geological Position and

says it was "the coming in and commencement of the Keuper," but in the same place he apparently misunderstands Mr. Sanders's views when he says that this author has placed it at the base of the New Red Sandstone (*loc. cit.* p. 176): moreover, through a great part of the paper it is assumed that the conglomerate is at the base of the Keuper, and yet in other parts the position is shifted, and we are told that it is perhaps contemporaneous with the Muschelkalk (*ibid.* p. 51 and 189); or again, that it is at the top of the New Red (p. 186),—Mr. Sanders's views being adopted here without due acknowledgment, while his reasoning is scarcely appreciated: on the other hand no new facts are given which would invalidate Mr. Sanders's opinion expressed in 1849. We must add that the term Reptilian Conglomerate used by Mr. Etheridge is open to strong objection.

The Reptiles found about 1834 were originally described as belonging to three species in two genera, but lately Professor Huxley* has shown that Riley's *Palæosaurus platyodon* should be placed in the genus *Thecodontosaurus*; we have therefore now two species, *Th. platyodon* and *Palæosaurus cylindrodon*. Professor Huxley remarks that the teeth of the former have Scelidosaurian affinities, while those of the latter are allied to Megalosaurus.

The position of the quarry where they were found—

Geographical Distribution of the Reptilian or Dolomitic Conglomerate of the Bristol area."—Q.J.G.S., vol. xxvi., p. 174—191. (1870).

* On the classification of the Dinosauria with observations on the Dinosauria of the Trias."—Q.J.G.S., vol. xxvi., p. 32 and 50. (1870).

now built over—is shown on Mr. Sanders's section B and C, published in the "Reports of Superintending Inspectors of the General Board of Health," and which are now within the reach of every one, having lately been lithographed by Mr. Lavars, the enterprising map publisher, as an adjunct to the Geological Map of Bristol.*

A noted case of the large included boulders is seen in the new road leading down to the Hotwells;† the blocks are mostly rounded, but are so large, and so firmly imbedded that they have been cut through in making the road, and so made to appear angular. The larger blocks are below,—above they become smaller and smaller, while some score of feet higher the rock is Red Sandstone. There is nothing to add to the description of this conglomerate by Buckland and Conybeare (*loc. cit.* p. 291); the fragments which it contains come generally from the nearest Palæozoic strata; as the carboniferous limestone forms the great bulk of the hills, fragments of this are the most common ingredients, but Old Red and Quartz pebbles also occur; Coal Measure Sandstone is scarce in it. In the bed of the Severn on the "English Stones" it contains fragments of Diorite. In the Radstock country it contains chiefly Carboniferous Limestone, though that rock is now some four or five miles distant. In this district it frequently occurs at the base of the New Red, and is

* "Geological Map of Bristol, from surveys of W. Sanders, F.R.S., with four sections through the city and figures of fossils characteristic of the various formations," published by J. Lavars, Broad Street, Bristol.

† *Vide* Sir H. De La Beche in "Geological Observer," p. 554 (1851), and Mem. Geol. Survey, vol. i., fig. 26, p. 274.

termed "underlie," from its forming the covering to the Coal Measures. It is not found at High Littleton and Clutton Coalfield.

This rock is found throughout the coalfield accompanying the Carboniferous Limestone as a rule. The Calamine of the Mendips was formerly chiefly procured from this rock : the workings have now ceased. Lead is also found in it in irregular masses, and copper ore in small quantities at Clevedon. The conglomerate frequently contains hollow quartz geodes, the crystals pointing inwards, the so-called "Bristol Diamonds." These occur at Clifton (Buckland and Conybeare, *loc. cit.* p. 244), Wells, Clevedon, &c. Agates are also sometimes found in it.

The thickness of the conglomerate does not generally exceed 20 feet in one place ; it is thicker, however, on the flanks of the Mendips, *e.g.*, at Wookey Hole, where the cavern is excavated in this rock, Wells, and East and West Harptree.

The Sandstone of the New Red period is well seen in the New Cut at Bristol, and in this artificial river bank it may be easily examined ; again, on Clifton Down, as noticed above. The colour is usually highly ferruginous, but the beds are occasionally much paler. Of the sandstones Sir H. De La Beche says* "the red sandstones are unequally distributed,—where observed they usually constitute the base of the marls. Red Marls are very commonly associated with the Dolomitic conglomerates of the Mendip hills and cover them up.

In the Aust Cliff section the Red Marls which come in below the Green Marls, are given by Sir H. De La Beche as 102 feet thick. They here contain a great

* Mem. Geol. Survey, i. p. 255.

abundance of gypsum, both in irregular strings at all angles, and in lumps in layers. In one of the Faults in this cliff is a vein of a pale bluish Celestine (Strontium Sulphate). This mineral is abundant in the marls, both at Bitton, Wickwar, and Clifton itself. Large quantities were thrown up lately from house foundations and drains between Alma and Oakfield Roads, and at Cotham; it is also seen in Clifton Station railway cutting in small quantities. The crystallised specimens for which Bristol was famous came from Pyle Hill, and were found in making the Bristol and Exeter railway and goods' sidings.

Since it has been proved by Mr. Sanders that there is no Permian in the district, it becomes plain that the Bristol area was dry land during that period at least; and such land consisting of the arches or anticlinals of Carboniferous rocks mainly at the surface, must have been exposed to all the agents of meteoric denudation then in action. The reflection naturally will occur, have not these atmospheric agents had a large part in the removal of the vast amount of rock, Coal Measures and Mountain Limestone, denuded before the end, at any rate, of the New Red period. With regard to the amount of denudation Professor Ramsay says (*loc. cit.* p. 320). "That a mass of limestone, &c., once existing above great part of the Mendip Hills to an extent of at least 6000 feet high, had been removed by the denuding agency of the New Red Sea, or possibly by that sea and the earliest liassic waters," and in the district north of Bristol the mass removed is placed at 5000 feet thick (*Ibid* p. 305). The agency is here, and generally, perhaps, attributed to the sea of the New Red period, but on considering the nature of these deposits, combined

with the fact of their horizontal position on the truncated edges of the Palæozoic rocks, it seems probable that the work was done in some part before the Secondary period, and hence during the Permian, or that lapse of time represented by the appearance of a totally new fauna. The new life begins in our district with the Dinosaurian reptiles previously noticed, and whose development becomes less difficult to account for, if we have the area stationary during a lengthened period. In this respect the biological and physical facts would seem to point in the same direction.

RHÆTIC AND LIASSIC FORMATIONS.

The Lias occupies two very extensive areas in the immediate neighbourhood of Bristol; that one to the north of the river Avon is a vast outlier separated from the main range by the Mangotsfield Coal Measures; the surface of the ground occupied by this northern tract is slightly undulating or presents flat-topped ridges and knolls of moderate elevation. The other area constitutes the broad plateau-like base supporting Dundry Hill. The elongated outcrop of the Coal Measures of Clutton and Pensford divides the Lias of this part of Somersetshire into a western and eastern portion, each presenting certain distinctive features. The margin of the Lias around Dundry is well defined by an escarpment of the Keuper marls, capped by the more indurated Rhætic beds and Lias limestones. It is very conspicuous on Bedminster Downs, by Chew Magna and Norton Malreward.

The rocks and fossils of these two tracts show a

remarkable uniformity, so much so that certain beds are recognizable throughout the whole region. The ordinary Liassic strata have usually for a base Rhætic black shales and sandstones—a group of rocks so instructively developed in the neighbourhood that certain sections have thereby become classic ground. These Rhætics are seen on the edge of the Bedminster Downs, and the base of the Inferior Oolite is observable on the north west front of Dundry Hill, the intervening thickness of Liassic strata is estimated at 550 feet. Of this less than the moiety is known with any certainty as to its stratigraphical position, nature, and fossils. What can be well studied embraces the Rhætic and the lower and middle parts of the Lower Lias.

One continuous section alone exhibits the series of beds from the underlying Keuper to the highest beds of the Lower Lias visible in the district—it is that of the Saltford Railway cutting carefully measured by Mr. William Sanders during the execution of the works, and published by Dr. Wright.* The total thickness is 120 feet, of which about 40 feet belong to the A. Bucklandi-zone, 37 feet to the Angulatus-zone, 18 feet to the White Lias, and about 25 feet to the Rhætic. At the present time the beds are now partially concealed by debris and vegetation; but the section is of great value for the correlation therewith of isolated or less extensive sections, which offer greater facilities for examination, and in which the characteristic fossils can be found in their respective beds.

I will now record the various outcrops, natural and artificial sections, where each division may be studied.

* Quart. Journ. Geol. Soc., vol. xvi., pp. 399, 341 (1860).

I.—RHÆTIC.

Aust Cliff.—Palæontologically considered this is unrivalled among Rhætic sections. The following section was made by Mr. W. Sanders, and published by Sir H. De La Beche.*

In the upper part of the section we find about $2\frac{1}{2}$ feet of a grey argillaceous limestone, containing *Ammonites angulatus*, *Lima gigantea*, *L. succincta*, *Modiola Hillanoides*; below which are nine beds of grey marls and limestones, 25ft. 2in. thick, with *Am. planorbis*, the lowest stone bed, 8 inches, containing fish scales, and insect remains. This rests upon

		ft.	in.	
<i>Rhætic</i>	Black shales	6	0	
	Grey argillaceous limestone	0	8	Fish)
	Black shale	3	0	
	Calcareo-arenaceous bed	0	2	(Saurian and fish remains)
	Black shale	0	8	
	Bone-bed 4 in. to	0	8	(Saurian and fish remains)
<i>Keuper</i> , Greenish marls, &c.				

The Bone-bed is a conglomerate composed of rounded portions of an argillo-arenaceous and calcareous rock with which are mingled exuvæ of reptiles and fish, and occasionally a few bivalved shells. It is from this bed that the fine collection of *Ceratodus* teeth, now in the Bristol Museum, was obtained. The same collection contains other interesting fossils, notably portions of the dermal armature of *Mastodontosaurus*.

* *Memoirs Geol. Surv. Great Britain*, vol. i., p. 253; other references are Buckland and Conybeare, *Geol. Trans.*, 2nd series, vol. i., p. 37: Wright, *Quart. Journ. Geol. Soc.*, vol. 16, p. 380., &c.

Patchway.—By the railway station at Patchway, on the South Wales line, a low cutting displays the Rhætic beds resting on Keuper marls. The section is now obscure.

Section at Uphill Cutting, near Weston-super-Mare, on the Bristol and Exeter Railway, has been given by Dr. Wright.*

Pyle Hill, Bristol.—This section is not accessible, and is now much masked.

Willsbridge Cutting, by Bitton station, on the Bath and Mangotsfield railway, five miles from Bristol. "The Lias in this curious section occupies the centre of a small trough, into which its beds are compressed, with the White Lias as regularly underlying it. The *Avicula contorta* series below was largely opened, and I have never had the pleasure of seeing any other section to be compared with it. The Keuper marls are met with at the southern end of the cutting, and all are abruptly cut off at a short distance by the Pennant Rock.

	ft. in.
"Twenty-five beds of Lower Lias, with intervening bands	
marl of 	8 10

WHITE LIAS.

Seven beds of White Lias 	3 1½
Various rubbly beds, with <i>Monotis fallax</i> , <i>Pleuromya</i> , <i>Arca</i> , <i>Axinus</i> , <i>Modiola</i>	0 9
Laminated clay, <i>Estheria minuta</i> , <i>Bairdia liassica</i> , <i>Monotis fallax</i>	4 0
Occasional bands of conglomeratic stone 	1 0
Light grey conchoidal marlstone, <i>Cardium Philippianum</i> , <i>Pecten Valoniensis</i> , <i>Axinus</i> , <i>Cardita Austriaca</i> , and plant-like impressions 	6 6

* Quart. Journ. Geol. Soc., vol. xvi., p. 382. *et seq.*

RHÆTIC.

Blue laminated clay, crowded with Rhætic shells ..	...	6	0
Black shale, coprolites, fish scales and teeth, and <i>Discina</i>			
<i>Townshendi</i> ...	...	4	0
Conchoidal light-blue marl ...	...	11	0
* Keuper marls .	...	about 25	0

Newbridge Hill, railway cutting, near Weston, Bath, on the same railway. The Rev. H. Winwood† has described 8ft. 5in. of Rhætic strata having a Bone-bed at the base resting on Keuper marls.

Chew Magna.—Black Rhætic shales are exposed on the roadside ascending to Dundry Hill from this place.

List of fossils from the Rhætic series in the neighbourhood of Bristol :—

Trematosaurus, *Ichthyosaurus*, *Plesiosaurus rugosus*, *Mastodontosaurus*, *Capitosaurus*, *Acrodus minimus*, (Ag.), *A. acutus* (Ag.); *Hybodus læviusculus* (Ag.), *H. minor* (Ag.), *H. pyramidalis* (Ag.), *H. plicatilis* (Ag.), *H. raricostatus* (Ag.); *Gyrolepis Albertii* (Ag.), *G. tenuistriatus* (Ag.); *Sargodon tomicus* (Plien.); *Saurichthys apicalis* (Ag.), *S. longidens* (Ag.); *Sphærodus minimus* (Plien.); *Sphenonchus hamatus* (Ag.); *Nemacanthus filifer* (Ag.), *N. monilifer* (Ag.); *Ceratodus altus* (Ag.), *C. curvus* (Ag.), *C. daedalius* (Ag.), *C. emarginatus* (Ag.), *C. gibbus* (Ag.), *C. latissimus* (Ag.), *C. obtusus* (Ag.), *C. parvus* (Ag.), *C. planus* (Ag.), *C. trapezoides* (Ag.), *C. serratus* (Ag.); *Natica Oppelii* (Moore); *Neoschizodus cloacinus* (Quenst.), *S. concentricus* (Moore), *S. elongatus* (Moore); *Arcomya Suessii* (Moore); *Cardita austriaca* (Merian.); *Cassianella contorta* (Portl.); *Lima pectinoides* (Sow.); *Modiola minima* (Sow.); *M. minuta*

* C. Moore, Quart. Journ. Geol. Soc., vol. xxiii., p. 498 (1867).

† Proc. Bath Nat. His. Field Club, vol. ii., 1871.

(Sow.); *Monotis fallax* (Pflucker); *Ostrea liassica* (Strickland); *Pecten Valoniensis* (Defr.); *Protocardium Philippianum* (Dk.); *Pleuromya Crowcombei* (Moore); *Discina Townshendi* (Davids.); *Tropifer laevis* (Gould); *Estheria minuta* (Goldf.); *Bairdia liassica* (Brodie.).

II.—LOWER LIAS.

White Lias.—This name is given to a series of thin cream-coloured, saccharoidal limestones, separated by filmy partings of clay, and with which some marly beds are occasionally associated. The basement bed at Cotham, Bristol (no longer quarried), is a creamy white or blue limestone with arborescent markings of black oxide of manganese, and is locally known as "Cotham marble" or "Landscape stone." The topmost layer in the Bath and Radstock districts is a thick limestone called the "Sunbed." The fossils are usually individually rare, and the species few in number, the majority of which pass up into the overlying beds. The series is lithologically and palæontologically liassic. The thickness is variable,—at Aust, 11 feet; Willsbridge, 4 feet; Newbridge, 12½ feet; Cotham, 2 feet 4 inches, resting on Keuper marls.*

Zone of Ammonites planorbis is introduced in some localities by flaggy yellow limestones, full of *Ostrea liassica*, which are hence known as the oyster beds. The first beds of it in the Bedminster Down quarry and in Aust Cliff contains insects, crustaceans, and plants, and the whole thickness is about 4 feet. These oyster beds are well seen in a quarry about 3½ miles from Bristol on the Whitchurch road, resting on a White Lias limestone, 1 ft. 9 in. thick. They contain a large assem-

* W. W. Stoddart, Quart. Journ. Geol. Soc., vol. xxiv., p. 203

blage of species. At Avonside Wharf quarry, near Keynsham, they are 3ft. 6in. thick.

Above the oyster beds we pass into the familiar "Blue Lias," so extensively quarried for building purposes, roadstone, and lime burning. The whole is a succession of blue limestones, splitting vertically, and shaley partings; the limestones rarely exceed a foot in thickness, and the clay partings vary from mere films to 6 feet in thickness.

The lower portion contains usually very few fossils, but *Ammonites planorbis* generally prevails. At Cotham, the quarry is now closed, 12ft. 6in. thick of these beds were exposed; they contained *Ostrea liassica* throughout, and the characteristic Ammonite ranged from the top to the bottom (see Quart. Jour. Geol. Soc., vol. xxiv., p. 203, 204). This horizon may be studied in the quarries at Knowle and Bedminster, near Bristol; Avonside Wharf quarry, Keynsham; Aust; Uphill; and Saltford.

The rocks of the small liassic outlier on the Carboniferous limestone of Broadfield Down, seven miles from Bristol, beyond Barrow Gurney, present exceptional lithological characters, but are precisely similar to those at Sutton, Glamorganshire, and at Shepton Mallet, and probably belong to this and lower horizons. They have been described by Mr. E. B. Tawney* and Mr. C. Moore;† the latter gives the following section:—

	ft.	in.
Seven dirty-white limestones (<i>Modiola minima</i>)	...	10 4
Ragstone and rubbly beds	..	7 8
Conglomerates (thickness unknown) <i>Plicatula intusstriata</i> .		

* Quart. Journ. Geol. Soc., vol. xxii, p. 78.

† Id., vol. xxiii.. p. 504.

Zone of Ammonites angulatus.—This zone and the lower one are not distinctly separable, as they are in the counties to the north. With us *Ammonites Johnstoni* is the dominant shell, but *A. angulatus* occurs in the higher portion of the zone, and is not uncommon in certain localities. *Lima gigantea* everywhere prevails. Sections and exposures are :—Montpelier quarry, Bristol, whence *Monotis cygnipes* comes, though at the present time the quarry is not worked down to that level. Filton cutting, $3\frac{1}{2}$ miles from Bristol on the South Wales Railway, here may be seen the junction of the *angulatus* and *Bucklandi*-beds, of which they are about 10 feet of the former, and 30 feet of the latter; fossils from each group may be gathered in some numbers. Whitchurch cutting, 4 miles from Bristol on the Bristol and Radstock railway, presents an extensive section of the *angulatus* beds.

Zone of Ammonites Bucklandi.—The beds of this horizon are blue limestones and shales, somewhat like the lower series; but the limestones are usually greyer in colour and gritty, and thicker, especially the lower ones, which are crowded with *Rhynchonella plicatissima* and other fossils. *Belemnites infundibulum* occurs at Filton and Saltford cuttings in the higher beds.

The sections and quarries in this horizon are the Filton and Saltford cuttings, already mentioned; quarries near the Workhouse, Keynsham; quarries at Norton Green, Norton Hauteville, Black Lands, and others on the south side of Dundry Hill.

Our knowledge of the higher beds is exceedingly fragmentary. Blocks of arenaceous limestones containing *Pecten equivalvis*, may be picked up above Bitton,

evidently derived from the waste in-situ of the superior rock stratum of the Middle Lias.

Between the highest exposures of the Bucklandi beds, and the base of the Inferior Oolite on Dundry Hill, there is a great mass of rock about which we know little. On the ascent from High ridge micaceous shales are exposed in the ditch sides through a vertical height of about 100 feet. They contain impressions of fossils, which appear to be Mid-Liassic. These shales are traceable to within about 30 feet of the base of the Oolite, which consists of a blue, earthy limestone, 6 inches thick, charged with some characteristic fossils of the zone of *Ammonites opalinus*. Mr. Etheridge* writes, "The upper beds of the Upper Lias are feebly represented here, their only evidence being the few fossils enumerated below, which are widely scattered through the beds. *Ammonites bifrons*, *A. communis*, *Bel. tripartitus*."

MIDDLE AND LOWER LIAS OF THE RADSTOCK AREA.

Outside the areas of the Bristol Lias we have a particularly interesting set of liassic strata around Radstock, within an hour's ride from Bristol. The sections reach from the White Lias to the upper beds of the Lower Lias, with *Am. raricostatus*, and into the *A. Jamesoni* zone of the Middle Lias. The quarry sections vary in respect to the upper part of the Lower Lias, on account of erosion before deposition of the basement beds of the Middle Lias; and though its thickness does not exceed

* Quart. Journ. Geol. Soc., vol. xvi., p. 21.

15 feet, yet the horizons of *Ostrea liassica*, *Ammonites planorbis*, *A. Johnstoni* and *A. angulatus*, and *A. Bucklandi* are exceedingly well defined. Mr. C. Moore's "Upper and Middle Lias of the south-west of England," contains valuable information on the Lias of this district.

MUNGER QUARRY.—ZONE OF *A. JAMESONI*.

	ft.	in.
1. Soil.		
2. Blue Limestone, <i>Am. Ibcx</i> , numerous <i>Belemnites</i> , &c., fossils difficult of extraction	...	1 0
3. Yellow iron shot limestones— <i>A. Jamesoni</i> and others. Fossils abundant, and easy of extraction	...	8 6
4. Yellow limestone, with derived masses of black limestones containing <i>Am. varicosatus</i>	...	0 6

At Timsbury and Bowdish the *Oxynotus* zone is found. From it Mr. E. B. Tawney has obtained *Am. obtusus*, *A. Oxynotus*, and *A. Ziphus*.

The Middle Lias limestones at Munger, Clan Down, and Radstock (Old Pit Quarry), contain a profusion of fossils in a most excellent state of preservation. I have catalogued upwards of 120 species (Quart. Journ. Geol. Soc., vol. xxxi., 1875.)

List of localities affording sections of the Liassic and Rhaetic strata :—

MIDDLE LIAS.

ZONE OF AMMONITES JAMESONI.—Old Pit Quarry, Radstock; Tynning, a quarry $1\frac{1}{2}$ miles north-west from Timsbury; Clan Down, near Colliery, two miles north-west from Radstock; Munger, by Farmstead and abandoned colliery, two miles north-west from Welton Station.

LOWER LIAS.

ZONE OF AMMONITES OXYNOTUS.—Old Pit Quarry, Radstock; Bowdish, one mile due north from Welton Station; Clan Down,

Timsbury. by Conygre coalpit; Medyeat, one mile east from Timsbury.

ZONE OF AMMONITES BUCKLANDI.—Saltford Railway cutting, Filton Railway cutting, Keynsham Upper Quarries, Norton Green, &c., south side of Dundry. Radstock and neighbourhood.

ZONE OF AMMONITES ANGULATUS.—Saltford and Filton, Whitchurch Railway cutting, and Kenysnam Quarries, Montpelier, Bristol; Norton Malreward Quarry. Radstock and neighbourhood.

ZONE OF AM. PLANORBIS.—Saltford cutting, Whitchurch (near to), Aust, at Keynsham, Avonside Wharf Quarry, Bedminster, Knowle, Bishport, Broadfield Down. Radstock and neighbourhood.

WHITE LIAS.—Saltford, Aust Cliff, Newbridge, Willsbridge, Bedminster. Radstock and neighbourhood.

RHAETIC—Saltford, Aust, Willsbridge, Newbridge, Pyle Hill, Patchwar, Uphill.

INFERIOR OOLITE.

Mr. Etheridge in his notes on Dundry,* says that the Inferior Oolite Sands are present, 2 and 3 feet thick here. At Midford, near Bath, however, they are well seen, hence Professor Phillips has used the term "Midford sands," during the uncertainty as to whether they shall be classified with the U. Lias or Inferior Oolite. At Frocester Hill they are estimated by Dr. Lycett† as 75 feet thick, and at Wotton-under-Edge 120 feet thick, while in Dorsetshire they may be 200 feet. At Frocester Hill and Haresfield the characteristic fossils of the Cephalopoda bed, which lies on the top of the sands, may be obtained, but as it is just outside our limits we

* Quart. Jour. Geol. Soc., xvi., p. 22 (1860).

† "Handbook to the Cotswolds Hills, p. 142 (1857).

will refer to Dr. Lycett's little book (*loc. cit.* p. 18—25) and to the writings of Dr. Wright.*

Of the Inferior Oolite Limestones at Dundry the lowest beds are nowhere now exposed, the best quarry having been partly filled up and almost closed for some time, we therefore fall back upon Mr. Etheridge's published account. The lowest beds are full of ferruginous Oolitic grains, "iron shot;" the 2 to 3 feet at the base are described as being rich chiefly in Gasteropoda and Conchifera. The next 2 to 3 feet of similar Oolitic ferruginous limestones is said to be rich in Ammonites, as a distinction. *A. Humphresianus*, *Brocchii*, *Sowerbyi*, *læviusculus*, &c., are some of the species cited. It is unfortunate that there is no reference to the quarries whence this section was taken, and the succession of beds as given by the author cited is open to some doubt.

In a quarry on the Chew Magna Road there may be seen at the present time some of the iron-shot beds, and they are fairly rich in fossils. *A. Murchisonæ*, *Sowerbyi*, and *Humphresianus* seem to occur together. This is no doubt due to the beds being much condensed. The top of this quarry consists of about 5 feet of beds, which contain very few fossils. But our author gives above the iron-shot beds 8 feet of limestones rich in Conchifera, followed by others, 4 to 5 feet thick, with Brachiopoda: this must refer to some other quarry, the connection of the beds is now no longer plain. The Ammonites given are *A. Sowerbyi*, *Humphresianus*, *Truelleri*, *læviusculus*. The succeeding beds are said to

* "On the Palæontological and Stratigraphical relations of the so-called 'Sands of the Inferior Oolite.'"—Q. J. G. S., xii., p. 303 (1856).

be the Ragstones, about 8 feet thick, which are referred to the Parkinsoni zone: the Ammonites cited are *A. Parkinsoni*, *Humphresianus*, *læviusculus*; again no strict adherence to their proper zones. Above these Mr. Etheridge places the Building stones, while others have placed them below the Ragstones. He divides them into fine-grained building-stone below, 4 to 5 feet thick, to be seen in old workings on the Common; and above coarse Oolitic freestones, no thickness being given. They contain few fossils.

Freestones are at present worked in a quarry close to the church, where beneath a surface head we see thin rubbly limestones 5 feet, and below, freestones about 6 feet thick. Many years ago Dundry was a most prolific place for fossils, but owing to the quarries being so little worked, few good specimens can now be procured.

The Inferior Oolite limestones, which are about 190 feet thick at Leckhampton, have been estimated by Lonsdale as about 60 feet near Bath, while between these localities, at Wootton-under-Edge, they are put at 80 feet. The Inferior Oolite thus diminishes considerably in its southern range in the Cotswolds. If we accept Mr. Etheridge's figures it would be about 35 feet at Dundry. On the other hand the Midford sands increase in thickness to the south as a rule, at Frocester being about 75 feet, at Wootton-under-Edge about 120 feet, at Glastonbury Tor 190 feet, and in Dorsetshire over 200 feet.

The Inferior Oolite is largely worked for freestones all along their outcrop in the Cotswolds scarp from Bath to Cheltenham, and further north.

FULLER'S EARTH AND FULLER'S EARTH ROCK.

The band of best Fuller's Earth was about 3 feet thick,—one of inferior quality was 3 to 5 feet thick. They came in the middle of a mass of a clays and limestones, together about 150 feet thick. *Terebratula ornithocephala* is a very abundant shell in the clays. The good Fuller's Earth is restricted to Odd Down, and the sides of Midford Hill, near Bath.

BATH OOLITE.

A generalised section of this member of the Great Oolite would be Lower Ragstones, or coarse shelly limestones, 10 to 40 feet. Fine freestones 10 to 30 feet, Upper Ragstones—coarse shelly limestones, but containing some fine grained Oolitic beds, 20 to 55 feet. The freestones in the famous Box workings belong here. At Minchinhampton the beds of this division are 36 feet thick,* and have yielded about 300 species of fossils; of these 22 per cent. occur also in the Inferior Oolite.

BRADFORD CLAY.

This is to all intents and purposes a mere clay band belonging to the Forest Marble, as was long ago so considered by Lonsdale (*loc. cit.* p. 255). *Apiocrinus Parkinsoni* is common to both, while *Ter. coarctata* and *digona* occur in the Bath Oolite. It is well seen at Bradford-on-Avon just outside our district.

FOREST MARBLE

Consists chiefly of pale bluish shelly limestones, with subordinate beds of clay and sand. Near Frome the

* Lycett (*loc. cit.*, p. 92).

shelly limestones are 40 feet thick. At Sherston Magna, beyond Badminton, they split into such thin beds that they are used for roof tiles. The beds may be seen round Faulkland within our area.

THE CORNBRAsh AND OXFORD CLAY

Only occur in the south east portion of our area, round Marston Bigot.

CAVE DEPOSITS.

Allusion has been made to the Mendip caves, which are quite an important point of geological interest. The collection of Fossils from the Banwell Cave is in Taunton Museum, and should be seen if possible. Durdham Down Cave yielded *Hippopotamus Major*, and other fossils preserved in the Bristol Museum. Fossils from Cheddar cave, some from Wookey Hole are also there, and may be compared with others from Kent's and Oreston caverns (Devonshire).

RIVER GRAVEL.

There are extensive beds of gravel along the course of the river between Kelloway and Keynsham; they have yielded *Elephas primigenius* and *Rhinoceros tichorinus*, *Bos*, &c.

ALLUVIAL DEPOSITS.

In making the new entrance to Cumberland Basin, numerous bones of the Red Deer, Horse, Ox, &c., were obtained from the Upper bed of gravel; below which was clay, 4 feet, and below that gravel again, 6 feet.

St. Philip's Marsh—peat occurs under the alluvial clay.

RAISED BEACH.

The raised beach at Swallow Cliff, near Weston, was described by Mr. Sanders in the British Association Report for 1840.





BRISTOL AND ITS ENVIRONS.

SECTION VIII.

Meteorology.



THE observations upon which the following remarks and tables are founded, were commenced by the late Mr. William C. Burder at the beginning of the year 1853, and have been carried on, in recent years, by the writer. For some particulars, as the rainfall and extremes of temperature, the whole period has been available. For other particulars, as the mean temperature, the mean barometric pressure, &c., the observations of fifteen years only have been employed, the continuity of the records having been interrupted in the year 1868. All the observations have been taken at the same place, 7, South Parade, Clifton, of which the latitude is $51^{\circ} 27' 47''$ N., the longitude $2^{\circ} 36' 30''$ W., and the height above mean sea level, 192 feet.

MEAN BAROMETRIC PRESSURE.

The mean barometric pressure of the several months, and of the year, on an average of fifteen years (1853—1867) is shown in Table I. The observations have been corrected for index error, capillarity, temperature, and diurnal range, but not for elevation. The mean pressure for the whole period, reduced to a temperature of 32° Fahrenheit, and to the level of the sea, was 29.948 inches. Variations of atmospheric pressure, although they undoubtedly produce sensible effects upon the human frame, are of less interest in a comparison of places than some other elements of climate, by reason of their more general character, unless, indeed, a comparison were instituted between places very remote from each other.

MEAN TEMPERATURE.

The mean temperature of the air at Clifton is given in a condensed form in the second column of Table I., and more at length in Table II. In the latter table are shown the mean temperatures of each month and of each year, in the fifteen years from 1853 to 1867. The thermometers are placed on a Glaisher's stand, as far removed as possible from houses and walls, and the bulbs are about four feet above the ground. The results are deduced from two actual readings, and two self-registered indications (equivalent to four observations) daily, by the application of the corrections to be found in Glaisher's tables. It is likely that the mean temperature of February, for the fifteen years, is unduly depressed by the occurrence of two exceptionally severe Februaries, in 1853 and 1855, these being the two

coldest months of the whole period. But the error from this source can hardly amount to a degree, and in the case of the other months it is believed that the adopted values are still closer approximations to the truth.

The mean temperature of the coldest month in the series (February, 1855), was 29.3 degrees; that of the hottest month (July, 1859) was 66.0 degrees. It will be seen that the mean temperature of the whole year is liable to a variation of about four degrees, ranging from 46.5 in 1855 to 50.2 in 1857. The aggregate annual mean (48.7) is a little below that computed for Greenwich by Mr. Glaisher. The mean for Greenwich, deduced from a long series of years, is 48.9; or, if we take the particular series of years to which the Clifton observations apply, the Greenwich mean is 49.2. It would seem, therefore, that the mean temperature of Clifton, for the whole year, is about half a degree below that of Greenwich. The difference, however, is not uniformly distributed through the months. On the contrary, while the mean temperature of the summer months at Greenwich is nearly two degrees above Clifton, the mean temperature of the winter months at Greenwich is about half-a-degree below Clifton. In both cases, the proximity of the Bristol Channel has, no doubt, a mitigating influence. Dividing the year into quarters, and taking December as the first month of the winter quarter, we find that the mean temperature of the winter quarter at Clifton is 39.5, of the spring quarter, 46.6, of the summer quarter, 59.0, and of the autumn quarter, 49.6.

MEAN DAILY RANGE OF TEMPERATURE.

The mean daily range of temperature differs greatly in

the different months, as will be seen by inspection of the third column in Table I., which gives the results of fifteen years' observations (1853—1867). The daily range is least in December (8.6 degrees), and gradually increases through the succeeding months, until it reaches its maximum (18.2 degrees) in May. From May to December there is again a gradual decrease. The mean daily range, for the whole year, is 13.6 degrees. This is a larger range than is observed at the sea-side, but less than at most inland stations. At Uckfield, in Surrey, as appears by the observations of Mr. Prince, the mean daily range during 28 years was, for the whole year, 17.2 degrees. It was greatest in June, 22.8 degrees; least in December, 10.1 degrees. At Torquay, according to the best information at hand, the mean daily range varies from 12.1 degrees in June, to 7.1 degrees in December, averaging, for the whole year, 9.6 degrees. In the writer's view, a fairly large diurnal range of temperature in the summer months is conducive to health, the coolness of the night and early morning being both grateful and invigorating after the heat of the previous day.

EXTREMES OF TEMPERATURE.

In Tables III. and IV. will be found a record of extreme summer and winter temperatures, observed at Clifton during the past twenty-three years, and recorded by self-registering instruments. The highest summer temperature in this period was 91.4 on the 2nd of August, 1856; the lowest winter temperature was 7.1 on the 29th of December, 1860. The summer of lowest maximum was that of 1862, in which the thermometer never rose above 75. The winter of highest minimum

was that of 1868-69, in which the thermometer never fell below 26.

In the fourth and fifth columns of Table I. are given the extreme temperatures that may be expected (*i.e.*, not the possible but the probable extremes) in each month, and in the whole year. These results are obtained, for the months, by averaging the monthly extremes observed in the fifteen years, 1853—1867, and for the year, by averaging the annual extremes observed in the twenty-two years ending with 1874. It may be noted, as showing the rarity of long-continued and uninterrupted frosts, that, in the fifteen years, there was no example of either a December or a January without a temperature exceeding 50 degrees. There were, in the same period, four Februaries in which the maximum temperature fell short of 50, but in the month which yielded the lowest maximum of all, February 1853, a temperature of 45.4 was recorded.

HUMIDITY.

The quantity of invisible aqueous vapour that may be present in the air at any time, varies with the temperature. The higher the temperature, the greater the quantity of vapour that may be present. The numbers used to express the "humidity" indicate the proportion borne by the quantity that *is* present, to the quantity that *might be* present, the latter quantity (or "saturation") being called 100.

In Table I. will be found a column showing the mean humidity of each month, and of the year, for the fifteen years, 1853—1867. The results are derived from simultaneous readings of the dry-bulb and wet-bulb thermometers, taken twice daily. It will be noticed

that the dampest month is January (88.9), the driest, July (77.5). May is also a dry month, and the spring months generally are much drier than the autumn months. For the whole year the mean humidity is 83.1, the corresponding mean for Greenwich being 81.6. The air at Clifton is therefore a little more humid than the air at Greenwich.

The relation of the humidity to the direction of the wind has not been worked out in figures, but there is no reason to doubt that a discussion of the recorded facts would bear out the impression that, on the whole, the most humid winds are those which blow from points between south and west, the least humid, those from between north and east. Yet it is with winds from between east and south, and in connection with intense heat, that instances of extreme dryness of air usually occur. For example, on the 24th of July, 1870, the sky being, throughout the day, cloudless, and the wind blowing freshly from south-east and east, the dry-bulb thermometer, at 3 p.m., stood at 89.7, the wet-bulb at 63.8. The difference between the readings of the two instruments was therefore 25.9 degrees, and the calculated humidity was 23. So low a humidity as this is exceedingly rare.

It may be worth while to remark that, on dividing the period of fifteen years into three equal parts, it appears that the mean humidity of the first five years was 84.6, of the second, 83.5, of the third, 81.2. An analysis of the Greenwich figures suggests that a part, at least, of this curious result is to be referred to other than local causes, the Greenwich humidities for the same three periods being 82.6, 82.1, and 80.2. In both places, therefore, the humidity diminished, but the diminution

was more marked at Clifton than at Greenwich. In the first five years the humidity at Clifton exceeded that at Greenwich by 2.0; in the second five years, by 1.6; in the third five years, by 1.0. This *relative* diminution of humidity would seem to demand a *local* explanation, and this, perhaps, may be found in the large extent to which houses and roads have increased in the neighbourhood since the observations were commenced.

CLOUD.

The column in Table I. which is devoted to the mean amount of cloud, is based upon two observations daily, during the fifteen years ending 1867. The figures call for no remark beyond the explanation that the proportion of cloud is estimated by the eye, a clear sky being 0, and a sky entirely overcast, 10.

OZONE.

Observations of ozone were carried on during the twelve years, 1856—1867, according to Schönbein's method, and the mean results are set down in Table I.

Ozone is most abundant in the month of June, least so in November, and the difference between the two months is very large. On the whole, there is much more ozone in the summer than in the winter. Apart from seasonal influences, the proportion of ozone varies chiefly with the direction of the wind. When the wind, veering normally, reaches west-south-west, ozone becomes suddenly abundant. It continues abundant with the wind at west and north-west, is much more scanty when the wind has passed the north, and with winds between east and south is scarcely found at all. The

geographical relation of Clifton to the Bristol Channel, is probably the chief cause of these differences; its relation to the adjoining city may be a minor cause.

RAINFALL.

The last column in Table I. shows the mean amount of rain that fell in each month, and in the whole year, during the twenty-two years ending with 1874. The annual total is a little over 32 inches, and the monthly means range from less than 2 inches in April to over $3\frac{1}{2}$ inches in October. This large difference between the spring and autumn is not less striking when we compare groups of months. Thus, in the three months of which the early spring is the centre, namely, February, March, and April, the average aggregate fall is 6.138 inches. In the three months of which the early autumn is the centre, namely, August, September, and October, the average is 10.165 inches.

The driest year of the series was 1864, when the fall was only 22.746 inches. The most rainy year was 1872, when the quantity amounted to 42.366 inches. The smallest monthly falls occurred in April 1854, and in September 1865—in both cases 0.022 inch. The heaviest monthly fall was in August 1865—8.508 inches. For shorter periods, the most remarkable downpours were on March 11—13, 1859, when 3.041 inches fell in forty-eight hours, and on August 6, 1865, when 2.682 inches fell in twenty-four hours, and, of this, about $2\frac{1}{2}$ inches within four hours. To these must now be added the excessive rain of July 14, 1875, when 3.080 inches fell in 38 hours, and about 2.9 inches within 24 hours.

SNOW.

Out of the twenty-three past winters there have been nine in which the greatest depth of snow was less than an inch, six in which the greatest depth was more than one inch and less than two inches, seven in which it ranged between three and seven and a half inches, and one in which a depth of twelve inches was recorded. This very unusual event occurred on the 19th of March, 1867. As a rule, the neighbourhood of Bristol is less liable to deep snows than are the eastern, northern, or central districts of England, or even the more inland parts of Gloucestershire.

THUNDERSTORMS.

The total number of days on which thunder was heard at Clifton, in the fifteen years from 1853 to 1867, was 151. Of these, thirty-two were in the month of June, thirty in July, nineteen in May, seventeen in August, twelve in September, ten in October, eight in March and December, five in April, four in January, and three in February and November.

WIND.

The subjoined diagram indicates the relative prevalence of the different winds at Clifton, as observed during the ten years, 1853 to 1862. Sixteen points have been used throughout, and the sixteen radii in the figure represent these respectively, the length of each radius, measured from the circumference of the small circle, denoting the proportional prevalence of the corresponding wind. The large preponderance of westerly over easterly winds at once strikes the eye. North-east

and south-west winds are pretty evenly balanced, and north-west winds occur with about the same degree of frequency. A south-east wind is less common, and north and south winds are both comparatively rare.

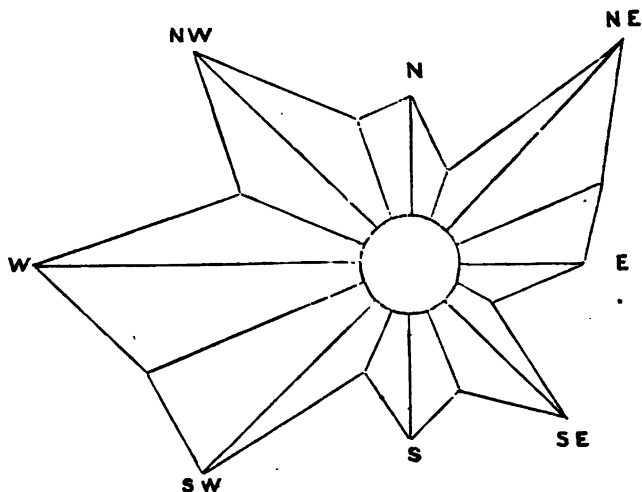


Diagram showing relative prevalence of winds at Clifton.

TABLE I.
Mean Monthly and Annual Results of Meteorological Observations at Clifton.

	Mean Barometric Pressure at 228 feet above sea.	Mean Tempera- ture.	Mean Daily Range of Tempera- ture.	Probable Highest Tempera- ture.	Probable Lowest Tempera- ture.	Mean Humidity (sat. = 100)	Mean Amount of Cloud (scale 0-10)	Mean Daily Ozone (scale 0-10)	Mean Rainfall.
	Inches.	Degrees.	Degrees.	Degrees.	Degrees.				Inches.
January	29.641	38.8	8.8	53.7	20.8	88.9	6.5	3.9	3.372
February	29.732	38.9	9.8	52.4	22.4	85.7	6.4	3.9	1.978
March	29.631	41.0	12.8	58.5	24.1	84.3	6.1	5.5	2.192
April	29.715	47.0	16.8	69.3	28.7	80.0	5.3	5.3	1.968
May	29.687	51.7	18.2	75.5	33.6	77.6	5.7	6.1	2.354
June	29.727	57.2	17.0	79.0	42.9	79.0	5.9	6.6	2.517
July	29.722	60.0	16.8	80.3	45.3	77.5	5.5	6.0	2.674
August	29.708	59.9	16.4	79.6	44.0	79.3	5.6	5.2	3.337
September	29.726	56.0	15.3	72.8	38.8	83.1	5.2	4.9	3.297
October	29.619	50.7	11.9	66.0	32.3	86.8	6.1	2.8	3.531
November	29.726	42.1	10.5	57.2	25.3	87.6	6.1	2.2	2.369
December	29.737	40.8	8.6	54.9	21.6	87.5	6.8	3.0	2.605
Year	29.698	48.7	13.6	85.0	16.4	83.1	5.9	4.6	32.194

TABLE II.

Mean Temperature of the air at four feet above the ground during each month of the
Fifteen years ending 1867.

Years.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Years.
1853	41.6	33.4	38.0	45.3	51.2	55.8	57.8	57.7	54.3	49.9	41.2	35.0	46.8
1854	39.0	40.0	43.2	48.6	49.6	54.0	59.0	59.1	58.1	49.0	41.0	42.3	48.6
1855	36.2	29.3	37.9	44.5	48.2	55.1	62.0	60.5	55.8	50.0	41.1	37.6	46.5
1856	40.0	41.7	39.6	46.0	48.3	56.2	60.0	61.8	54.0	51.0	41.9	41.5	48.5
1857	37.3	39.5	41.3	45.0	51.9	60.7	61.1	63.2	58.4	52.4	44.9	46.7	50.2
1858	38.5	36.0	41.2	46.9	51.3	61.5	58.6	60.7	59.0	49.9	39.6	42.5	48.8
1859	41.3	42.9	45.5	45.5	53.0	59.0	66.0	61.7	55.3	50.4	42.3	35.8	49.9
1860	39.9	36.1	40.8	42.5	53.4	58.4	58.1	56.9	52.1	50.5	40.5	30.0	46.6
1861	35.0	41.6	43.2	45.9	51.5	58.0	58.7	60.7	55.6	54.0	40.5	40.2	48.8
1862	39.9	41.1	42.5	47.7	54.0	54.9	57.0	58.6	56.3	51.2	38.5	44.6	48.9
1863	41.2	42.8	43.8	48.4	51.2	55.7	60.7	60.5	52.7	50.6	46.5	44.5	49.9
1864	37.6	36.5	42.1	48.8	55.4	56.2	60.7	58.5	55.9	49.9	42.2	38.6	48.5
1865	36.3	37.3	37.8	52.8	54.2	60.9	61.5	58.8	61.2	50.7	44.5	43.3	49.9
1866	43.0	40.6	40.3	47.9	50.5	59.6	60.2	58.5	54.7	51.5	46.2	44.5	49.8
1867	35.7	45.0	37.1	48.6	52.5	57.5	59.1	61.2	56.6	50.0	40.4	39.4	48.6
Means	38.8	38.9	41.0	47.0	51.7	57.2	60.0	59.9	56.0	50.7	42.1	40.8	48.7

TABLE IV.
Lowest Temperatures in 23 Winters.

Summer.	Maxima.	Date.
1853	76.5	July 7
1854	79.8	July 24
1855	82.8	May 26
1856	91.4	August 2
1857	85.5	August 23
1858	86.2	June 15
1859	86.6	July 18
1860	76.6	July 4
1861	83.5	June 14
1862	75.0	August 25
1863	83.1	July 11
1864	84.5	May 19
1865	86.8	June 21
1866	85.5	July 12
1867	84.9	August 13
1868	90.2	August 4
1869	89.0	July 17
1870	91.3	July 24
1871	84.7	August 13
1872	87.5	July 21
1873	90.9	July 22
1874	87.2	July 19
*1875	83.3	June 3

* To July 20.

TABLE IV.

Lowest Temperatures in 23 Winters.

Winter.	Minima.	Date.
1852-53	18.0	February 28
1853-54	10.1	December 29
1854-55	11.5	February 18
1855-56	14.1	December 22
1856-57	16.7	January 30
1857-58	20.7	January 24
1858-59	22.8	November 24
1859-60	10.2	December 19
1860-61	7.1	December 29
1861-62	19.4	February 9
1862-63	21.7	November 24
1863-64	18.8	January 6
1864-65	13.5	January 29
1865-66	22.0	March 1
1866-67	14.1	January 4
1867-68	23.7	January 3
1868-69	26.0	January 25
1869-70	21.0	January 28
1870-71	10.0	January 1
1871-72	21.0	December 8
1872-73	25.0	February 25
1873-74	19.7	December 11
1874-75	13.6	December 31



BRISTOL AND ITS ENVIRONS.

SECTION IX.

Anthropology.



PRE-HISTORIC antiquities are by no means deficient in the neighbourhood of Bristol. Among these may be specially noted the fortified town on Worle Hill, close to Weston-super-Mare, the hill forts of Stinchcombe, and of Uleybury, both near Dursley, and the remains of Wansdyke, traceable at several points a few miles south of the Avon, and connected with the fine stronghold of Maes Knoll, to the east of Dundry, and the less important one of Stantonbury. To these may be added the fortresses of Dolberry and Cadbury in Somerset, and Sodbury in Gloucestershire, and that of Borough Walls in Leigh Woods, now, alas! almost wholly destroyed. At Uley is a very fine chambered long barrow, and at Stanton Drew, seven miles south

of Bristol, some of the finest megalithic remains in England, including one almost perfect circle. Bone-caves occur in the carboniferous limestone of Mendip and elsewhere.

Wansdyke is supposed to mark the frontier between the Belgæ and the Dobuni or Boduni, the latter of whom are suspected of having been a race of long-headed (Iberian?) aborigines. There is not, however, in the present day, any difference in the average length of skull of Gloucestershire and Somerset men.

Of Roman occupation the most noteworthy memorials are to be found at Bath, at Woodchester near Stroud, where was a remarkably fine Roman villa, and on the Monmouthshire side of the Severn.

The Saxonization of the district seems to have taken place immediately after the great victory of King Ceawlin at Dyrham, when he slew three kings and captured three chesters, one of which was Bath. With Dr. Guest and Dr. Freeman, I believe that Ceawlin not only annexed to Wessex all South Gloucestershire, but extended his frontier westwards to the Axe, and southwards to Wookey and Englishcombe; and that the country to the south of these points was acquired by the West Saxons in the course of the seventh century. The Forest district, from the Severn to the Wye, was under English rule in the time of Offa, but of Monmouthshire only a portion of the low country was gradually becoming English ground in the days of the Confessor, and of Harold, and of the Conqueror. English rule gradually extended over the whole country, and more slowly still the English tongue obtained the mastery as far as the banks of the Usk and the Gavenny; but in spite of the law, which reckons Mon-

mouthshire an English county, popular parlance in Bristol recognizes its true character as a portion of South Wales.

Considerable ethnological differences are observable within a radius of thirty miles round Bristol. The peasantry of North Wilts and of the Cotswold country, within the watershed of the Thames, display generally Teutonic types more or less pure—smooth features and fair complexions. In the valley of the Avon, from Chippenham westwards, an increased proportion of Keltic or British blood exhibits itself in the greater tendency to dark hair. In the northern corner of Somerset, from Bristol to the Axe, the fair Frisian type crops up pretty frequently, but on the slopes of the Mendips, and in the hilly region of Selwood, the preponderance of the ancient blood is reasserted by the darker colours, the more angular visages, and the square shoulders. In the hill country beyond the Usk the Silurian type is conspicuous—a frame short and robust, face broad, skin dark and ruddy, eyes dark and almond-shaped, brows arched, hair dark or brown. The same race, more or less crossed with English and Flemish blood, overspreads the low country of Glamorgan, with east Monmouthshire, and the Forest of Dean.

The dialect of Wessex, exemplified in the poems of the Rev. W. Barnes, and those of Mr. J. Edwards ("Agrikler,") is far from being extinct in Somerset, and the Gloucestershire speech differs little from it except in intonation. The Anglicised Welshmen beyond the Severn have a dialect and accent of their own.

The population of Bristol has been fed chiefly from Somerset, Gloucestershire, and Wales; and from the

evidence of surnames the proportion of persons of Welsh descent may be estimated at one-tenth. Irishmen, and persons of Irish blood, are remarkably few, considering the proximity of their country. A certain amount of physical degeneration has taken place among the native Bristolians, as among the natives of other British cities—300 of them yielded to me an average stature and weight of 5 feet 5·8 inches and 132½ lbs., after deductions made for shoes and clothing. The average height of men in the surrounding counties may fairly be put at half an inch more.





BRISTOL AND ITS ENVIRONS.

SECTION X.

Zoology, Entomology, and Botany.

ZOOLOGY.—AVES.



THE physical aspects of the Bristol district, consisting of open Downs, well wooded heights and valleys, rivers, streams, and muddy estuaries of the Avon and Severn, afford very favourable haunts for a considerable number of our indigenous birds, and summer and winter visitors. Although not so favoured as the east and south coast for Continental stragglers, yet at intervals we are visited by some few and attractive species.

The majority of our birds are of course arboreal. The sea coast, with its granite, chalk, or limestone

cliffs, the haunts and breeding places of the Colymbidæ, Alcadæ, and Laridæ, is beyond our limits, consequently members of these families form but a small part of our lists. The Steep Holm, in the Bristol Channel, is perhaps the nearest point where the common Sea Gull breeds. In the autumn and winter the banks of the Avon and Severn abound with them, as well as Black-headed, Herring, occasionally Great and Lesser Black backed Gulls, and Common Tern.

The absence, too, of extensive and unfrequented Marsh lands, the natural habitat of the Scolopacidæ and Anatidæ permits us to number but a few of these interesting families, most of the species of which are uncommon.

Thirty years since our Bristol birds numbered about 320 species. About 73 have since been discovered, making up to the present time 393 species. Of these the Bristol district includes about 100 residents, 35 summer, and 23 winter visitors, including a few rare stragglers, numbering altogether 157 species.

The *Falconidæ* form but a very small group. The "Honey Buzzard" has been twice killed at Leigh; specimens also of the "Common Buzzard" have been shot, and the "Kite" once. The "Hobby" and "Merlin" are the only others of sufficient rarity to need notice: it is many years, however, since either have been observed.

The *Strigidæ* are represented by the two ordinary species, the Brown and Barn Owl. The short and long-eared species are both rare.

None of the *Laniadæ* have been noticed, excepting our ordinary summer visitor, the Red-backed Shrike.

Amongst the small group of the *Muscicapidæ* only

the Red Flycatcher need be mentioned as being of great rarity, having occurred once only.

The ordinary species of the *Merulidæ* are well-known resident or winter visitors. The Ring Ousel is a scarce summer visitant.

Amongst the *Sylviadæ* no species have been observed requiring any special remark. The Reed, Sedge, and Grasshopper Warblers are all uncommon. Nightingales have been this last two or three years much more numerous. The Bearded and Crested Titmice are both absent from the *Paridæ*. All the others are tolerably common, *P. Major* and *cæruleus* especially so. The one representative of the *Ampelidæ*, the Waxwing, has occurred at rare intervals.

The common species of the *Motacillidæ*, *Anthidæ*, and *Alaudidæ* are all pretty generally distributed, the "Rock pipit" being the only really local bird. The rare visitor, *A. alpestris*, the Shore Lark, was captured by a birdcatcher in the neighbourhood in 1873, and exposed for sale with Yellowhammers; it was, I believe, purchased for a shilling, and given to the Zoological Gardens, in whose aviary it is still retained.

In the *Emberizidæ* we have one rare winter visitor, the Snow Bunting, which has been shot at Avonmouth: the Cirl Bunting occurs occasionally. The *Fringillidæ* are very well represented. The Brambling is local; also the Tree Sparrow. Haw Finches have this last two or three winters been more abundant, remaining till late in the spring. Many breed here: at Henbury, and near Almondsbury, nests and eggs have been taken. The Mountain Linnet is a rarity; as also the Crossbill; both have occurred at Leigh and Henbury.

We have another rarity in the family *Sturnidæ*, the

“Rose-coloured Pastor:” this has been once shot in the vicinity. The *Corvidæ* all belong to us with the exception of the Chough. The Hooded Crow and the Raven are both rare. The families forming the group of *Scansores* call for no special remarks. Except the occurrence of the Hoopoe some years since, both Great and Lesser Spotted Woodpeckers are both uncommon. Another rare straggler, the Bee Eater, visited Stapleton a few years ago. Several specimens were seen by Mr. G. Harding frequenting the Beehives in his grounds, three of which were shot by him.

The Kingfisher may be found in several parts of the neighbourhood. The *Hirundinidæ* and *Caprimulgidæ* are each represented by the generally distributed species known almost everywhere: so also with the *Columbidæ* and *Phasianidæ*. Two species of the *Tetrionidæ*, the Black and Red Grouse, have been shot, but of great rarity. The Quail is another rare visitant. The *Charadriidæ* and *Ardeidæ* families are not numerous, the commoner species only have hitherto been noticed, with the exception of the Bittern, which has been shot near Portishead and Clevedon. Amongst the *Scolopacidæ* too we number but a few, the Green Sandpiper perhaps being the rarest. The Whimbrel, Bar-tailed Godwit, and Redshank are occasional visitors. The Spotted Crake and Grey Phalarope are rare members of the next two families, occasionally occurring. The remaining group of the *Natatores*, comprising the Ducks, Divers, and Gulls, &c., leave little to remark, a few are common; the chief rarities hitherto noted have been the Canada Goose, Shoveller, Scaup Duck, and Goosander. Amongst the *Anatidæ*, the Great Northern Diver, two of which were shot in the Floating

Harbour amongst the *Colymbidæ*. The common species of the *Alcadæ*, the Guillemot and Razor Bill, are with us only occasional visitants. The Cormorant and Shag are also occasionally met with off Weston-super-Mare. The only rarities amongst the *Laridæ* is the Little Gull, shot in 1850 at Portishead. The Stormy Petrel has occurred there also, but these waifs and strays from the open sea are but accidental visitors, there being so little congenial to their habits in the muddy waters of the Severn.

MOLLUSCA.

LAND AND FRESH WATER MOLLUSCA.

Of Mr. Gwyn Jeffrey's 32 genera only one *Geomalacus* is not represented—this genus being restricted to the West of Ireland. Of 22 genera we have all the species.

Again, of his 127 species we have 105. The greatest deficiency is in the genus *Helix*, where we have only 18 out of 24 species, and in *Vertigo* where we have four out of 9 species.

Testacella haliotide and *Maugei* are very local, the latter rather abundant in some Clifton gardens, was introduced with some plants from the Canaries.

Complete lists of the species and their habitats will be found in the "Proceedings of the Bristol Naturalists' Society," vol. i., part 2 (1875).

ARACHNIDA.

The varied nature of the Bristol district promises, when more thoroughly worked, to furnish an unusually

long list of *Araneidæ*. From our own observation in the last few years we have noted a list of 63 species.

It would seem that the tribe *Senoculina* or six-eyed spiders are more abundant here than in most other localities in England. The genus *Segestria* is a rare one, but within the last year or two it has been found frequently on Clifton Down among the limestone rocks.

ENTOMOLOGY.

Though the neighbourhood of Bristol probably produces as many species of insects as any district of similar extent in the country, it must be acknowledged that the complaint of a great paucity of insect life in many of our best hunting grounds is but too well founded. For this reason the entomologist's first visit to such promising looking localities as the Leigh Woods, Brockley Coombe, &c., will probably result in disappointment. Few of our best local insects are to be found in profusion, most of them requiring careful search, even by those collectors who are best acquainted with their habits. Some species, which used to occur here, seem to have disappeared from the district entirely.

COLEOPTERA.

Although we are unable at present to state the exact number of species of this order which have been hitherto recorded as natives of the district, some idea of the Coleoptera of this locality may be formed by the statement of the fact that upwards of 350 *species* (exclusive of *Brachelytra*) were captured, in one season, by Mr. S. Barton, in the immediate neighbourhood of Bristol.

The following may be mentioned as some of the most noteworthy :—

Of the genus *Cicindela*, two species occur in the district, *C. campestris*, which is abundant on dry heaths at Leigh, Clevedon, &c., and *C. maritima*, on the beach at Weston. *Tarus axillaris* and *Iebia chlorocephala* may be taken under stones on Durdham Down, and in similar situations, on the other side of the river, *Licinus depressus* has been met with, in January. The curious *Cychrus rostratus* occurs at Leigh, where also may be found *Sphodrus leucophthalmus* (sparingly), *Elater balteatus*, and *Hypulus quercinus*, on oaks, and *Platerhinus laterostris* on ash trees. The scarce *Eros minutus* has been found at Leigh.

Near Baptist's Mills, several specimens of *Bolbocerus mobillicornis* have been captured.

Of the *Longicornes* our best species is the rare *Lamia textor*, which occurs at Ashton; this interesting rarity may be found, during the month of August, crawling up the young shoots of willows, at dusk. The curious *Acanthocinus adilis* has been taken at Kingswood, and *Strangalia aurulenta* has been met with at Leigh. The scarce *Hylotrupes bajulus*, and *Callidium variabile*, occur at Clifton and Stapleton, respectively. The musk-beetle (*Aromia moschata*) is common on willows at Frome Glen, &c. Ten species of *Donacia* are found in the district, on aquatic plants. *Iema puncticollis* and *I. melanopa* occur on hedges. *Clythra 4 punctata* is occasionally found at Brockley, and *Cassida murræa* may be taken by "sweeping." The pretty *Endomychus coccineus* is common at Stapleton, on beech trees, and *Oncomera femorata* occurs in great abundance on ivy and sallow-bloom, and also at "sugar."

The *Brachelytra* is unfortunately a neglected division of our local *Coleoptera*, therefore it is impossible to give even a faint idea of the number of species occurring in the Bristol District.

Amongst the more local species are the following:—*Aleochara fuscipes* var. *lata*, not unfrequent. *Lomechusa emarginatus* occurs in ants' nests at Leigh. Several species of the genera *Tachinus* and *Tachyporus* turn up at all times and places. Fungi in the Leigh Woods afford examples of the genus *Boletobius*, including the local *B. exoletus*. *Staphylinus erythropterus* is frequently taken on Durdham Down and Shirehampton. Numerous species of the genera *Ocypus*, *Philonthus*, and *Xantholinus* are met with, including *O. ater*, *P. splendens*, *sanguineolenta*. *Baptolinus alternans* occurs at Leigh, where also *P. caligatus* may be found. Several species of the genus *Stenus* are found at Leigh, &c., where also the genera *Oxytelus*, *Homalium*, and *Anthobium* are represented, but none of these species call for special remark.

HYMENOPTERA.

Our district is rich in this order, though unfortunately very little is now known of its productions, there not being any resident collector. The late Mr. Walcott, of Clifton, had a very fine collection, containing numerous rare species of bees, ants, ichneumons, &c., most of which he had himself collected in the neighbourhood of Bristol; unfortunately, the result of his labours is lost to us, his collection being no longer among us, and no list of the local species having been found among his papers. There are, however, in the Bristol Museum, two cases, containing a collection of "Bees taken in the neigh-

bourhood of Bristol," which were presented to that institution by the late Mr. Walcott, and which will, no doubt, be of interest to Hymenopterists, in the absence of further information on the subject. We understand Mr. Walcott's collection is now in the Cambridge Museum.

LEPIDOPTERA.

As is probably the case in most localities, this order of insects has been a greater favourite with collectors here than any of the others; but though the larger species have been tolerably well worked up, the smaller have been very much neglected. Only three or four of our local Lepidopterists give any attention to the "*Micros*," yet nearly every year adds some fresh species to our list. It may, therefore, be taken for granted that our present knowledge of our local insect fauna is still far from complete, even in this the best known order; further research will, no doubt, result in the addition of numerous fresh species, especially among the *Micro-Lepidoptera*. Want of space prevents our naming more than a few of the most interesting species to be met with in our neighbourhood. A more complete "Catalogue of the Lepidoptera of the Bristol District" is in preparation, and, it is hoped, will be ready for publication in this year's volume of the "Proceedings of the Bristol Naturalists' Society."

The classification and nomenclature adopted in this paper being that of the well-known "Synonymic List of British Lepidoptera," published by Mr. Henry Doubleday, it has not been thought necessary to quote the authors of the generic and specific names in every case, as they may easily be found on reference to the above-named work.

No less than four-fifths of the British Butterflies have been recorded as captured in the district. "The Bath White" (*Pieris Daphidice*) is a very doubtful native, nothing being now known of its occurrence either in our own neighbourhood, or in that of our sister city, from which it takes its English name. *Papilio Machaon* is also reported to have been found near Bristol, (see Mr. Edward Newman's "British Butterflies," page 153) but though it probably occurred in our district before the marshes were drained, it can no longer be claimed as a native. Exclusive of these two species, no less than fifty-two of the sixty-five British butterflies have been recorded as found here, though in some cases only single specimens have been met with.

Leucophasia Sinapis occurs near Dursley, and has also been once seen near Clevedon, but is nowhere common in the district. *Pieris crataegi* was formerly often met with near Bristol, but is now very rare here. *Colias Edusa* is sometimes common, but *C. Hyale* is very scarce, only one or two having been observed. There is no recorded capture of the variety *Helice* in our neighbourhood. All the species of the genus *Argynnis* have been taken here, except *A. Niobe*, which is rather doubtful as a British insect. *A. Lathonia* has only once been recorded; a fine specimen was captured in Messrs. Garaways' nursery grounds at Redland, some years ago. Two or more specimens of the rare "Camberwell Beauty" (*Vanessa Antiopa*), were met with in the same locality, by the late Mr. Mayes. This beautiful species has also been taken near Bourton, and, in 1872, the last recorded specimen was captured on Durdham Down, and is now in the possession of Mr. Chatterton Dix, of the Triangle. If these butterflies come to us

from Norway, it seems strange they should be found so far West. All the other British species of *Vanessa* occur with us, including *V. C.-album*, which is sometimes common at Brockley Coombe. *Apatura Iris*, and *Limnitis Sibylla*, are both reported to occur near Bristol, though they are very rare; a specimen of the last named was captured, many years ago, flying by the side of the river Avon, under Cooke's Folly woods. All the genus *Salix* occur in abundance, though *S. Hyperanthus* is local. *Thecla pruni* is the only absent "hair-streak" from our list. *T. quercus* and *W. album* are common sometimes, in the larva state; *T. Betulæ* has only once been met with at Brockley. All the "Blues" are found in the district, except *L. Arion* and *L. Batia*. The rare *Lycaena Acis* has been taken near Dursley, and *L. Alsus* is common at Clevedon, Portishead, &c. *Nemeobius Lucina* is abundant near Dursley, and is also said to occur near Weston. The only *Hesperidæ* absent from our list are *H. Paniscus* and *Actæon*, though *H. linea* and *comma* are very local and scarce in our neighbourhood.

The *Nocturni* are not nearly so well represented with us as are the butterflies, only about one-third of the British species having been recorded. Several of these, however, are rare and interesting species. *Acherontia Atropos* is sometimes common in the larva state. *Sphinx convolvuli* seems to have become rather scarce of late years, but used to be often met with in gardens, flying over petunias, &c. *Deilephila lineata* and *D. galii* have both been captured at Clifton and at Weston-super-Mare. Three specimens of *Chaerocampa Celerio* have been recorded; two from Henbury, and one from Ashley Road, Bristol. *Macroglossa fuciformis* occurs at

Leigh Six of the "clearwings" are found here, including *Sesia ichneumoniformis*, which is not rare in one locality. Fortunately for local fruit cultivators *Zeuzera Æsculi* is scarce here, though *Cossus ligniperda* (the Goat Moth) is abundant, its larvæ being very destructive to trees, especially willow and cherry. *Procris statice* and *P. Geryon* are both rather common here, though local. *Nola strigula* appeared in some numbers near Clifton, in 1872, but has not been noticed there before, or since. A fine specimen of the beautiful *Deiopeia pulchella* was captured at Bishopston, in 1871, as recorded in the "Entomologists' Monthly Magazine," vol. viii., p. 111. *Lasiocampa quercifolia*, *Endromis versicolora*, and *Saturnia carpinii*, have all been met with near Bristol, but are by no means common.

Our district is strong in *Geometrae*, about 187 species having been recorded as natives, equal to exactly two-thirds of the entire British list. *Epione advenaria* is common at Leigh, and at Portishead. *Ellopia fasciaria*, *Eurymene dolobraria*, *Pericallia syringaria*, *Boarmia abietaria*, *Thera firmata*, and many other local species are to be found in the woods near Brockley Coombe. *Acidalia holosericeata* is abundant in one corner of Durdham Down. In the Leigh Woods the following species occur:—*Ennomos erosaria*, *Tephrosia extersaria*, *Phorodesma bajularia*, *Asthena sylvata* and *blomeraria*, *Eupisteria heparata*, all five British species of *Lobophora*, *Cidaria psittacata*, &c. *Emmelesia unifasciata*, and *Captogramma fluviala* are occasionally met with near Stapleton, and on Clifton Down, on gas lamps.

Of the interesting genus *Eupithecia*, no less than 35 species have been recorded as natives of our district, among which are *E. consignata*, *subumbrata*, *plumbeolata*,

albipunctata, *valerianata*, *fraxinata*, *distinctata*, *campanulata*, *irriguita*, *expallidata*, *dodoneata*, and *sobrinata*. The pretty little *Eubolia lineolata* is abundant on the sands at Weston-super-Mare.

All the *Drepanulidae* are to be found in the Leigh Woods, including our greatest rarity, *Platypteryx sicula*. Of this fine species, some two dozen specimens have been found here during the last thirty years. There is no reliable record of the occurrence of this insect in any other British locality.

The *Pseudo-bombyces* are represented in our neighbourhood by 17 of the 27 British species, of which the most interesting are *Dicranura furcula*, *Stauropus fagi*, *Petasia cassinea*, and *Notodonta dictæoides*, *chaonia*, and *trepida*.

The *Noctuae* are not nearly so well represented, only about 190 of the 308 British species having been reported as natives. To the entire absence of bog, and small amount of marsh land in our neighbourhood, is to be attributed the absence from our list of most of the "marsh" insects. Thus, of the genus *Leucania*, we have only six species, and of *Nonagria* only four, being about one-third of the recorded British species. Our list is also very poor in the *Acontidae* and allied families.

Thyatira derasa and *batis* are occasionally taken on or near Durdham Down, where also the following species are found:—*Cymatophora ridens*, larvæ on oaks; *C. duplaris*, scarce; *Acronycta tridens*, *Luperina cespitis*, *Mamestra furva*, *Agrotis cinerea* and *lucernæa*, *Cirrhædia xerampelina*, *Euperia fulvago*, *Dianthæcia cucubali*, *Cucullia chamomillæ*.

In the Leigh Woods may be found *Acronycta leporina*, *alni*, and *ligustri*, *Noctua glareosa*, *Trachea piniperda*, *Dianthæcia conspersa*, and *Dasypolia templi*.

Near Stapleton have been found *Leucania littoralis* (one specimen only), *Nonagria furva*, *Neuria saponariæ*, *Apamea unanimis* (sometimes rather common at sugar), *Caradrina Morpheus*, *alsines*, and *blanda*, *Agrotis puta* (abundantly at sugar), *A. saucia*, *ravida*, *aquilina*, *Hadena adusta*, *chenopodii*, and *genistæ*.

Tethea retusa, *Eremobia ochroleuca*, *Epunda viminalis*, and *Plusia festuæ*, occur near Brislington. *Catocala promissa* and *sponsa* are reported from Compton.

All the species of *Tæniocampa*, except *Leucographa*, are found on sallow-bloom, in the neighbourhood of Bristol. The following are some of our best *Noctuæ* to be met with, in the autumn, on ivy-bloom:—*Dasycampa rubiginea* (taken nearly every year, but always rare), *Oporina croceago* (one specimen only recorded), *Xanthia aurago*, *Epunda nigra*, *Calocampa vetusta* and *exoleta*, *Xylina semibrunnea* and *petrificata*, and *Heliothis armigera*, of which last rare species several specimens have been captured on Clifton Down. The late Mr. Crotch took a specimen of *Cerastis erythrocephala* near Weston-super-Mare, where he also met with a specimen of *Micra parva*. *Agrotis valligera*, and *Toxocampa pastinum*, have also been found in that neighbourhood.

Of the *Deltoids* we have only half the British species recorded as natives of our district, viz., eight, of which the best are *Hypaena rostralis*, and *Hypenodes albistrigalis*, and *costaestrigalis*. The solitary British representative of the *Aventiidae*, *A. flexula*, is widely distributed throughout our district, but is nowhere common. It has been taken near Clifton, Almondsbury, and Portishead.

About 43 of the 76 British *Pyrallides* have been recorded as found near Bristol. *Pyralis glaucinalis*

occurs at Stapleton; *Aglossa cuprealis* and *Diasemia literalis*, have also once been met with in the same locality, and *Scoparia cembrae* and *pallida* are not rare in marshy fields. *Pyrausta purpuralis* is common at Brockley Coombe, and *P. ostrinalis* on Durdham Down; these two forms seldom, or never, appear together in our neighbourhood, and seem to be "good" species, i.e., not varieties of one insect, as has been suggested. *P. punicealis*, *Herbula cespitalis*, *Ennychia cingulalis*, and *anguinalis* also occur on the Downs, but are not common. *Endotricha flammealis* used to be common near the Suspension Bridge, but has not been observed lately. *Botys pandalis* occurred formerly near Almondsbury, where also *Spilodes sticticalis* has been found. *B. lancealis* has been met with in the Leigh Woods, and *B. asinalis* is abundant throughout the district, wherever its food-plant, *Rubia perigrina*, grows. The presence of this species in any locality can always be detected by the blotched appearance of the madder leaves, caused by the larvæ eating off the green portion of the leaves only, the inner "shell" being thus exposed, and bleached by the sun. *Botys hyalinalis* is also common on the Downs, and *Scopula ferrugalis* is sometimes abundant in the Leigh Woods.

About 40 species of *Crambidae* have been taken in the district. *Crambus falsellus* is very rare here; *C. dumetellus* used to be common on Durdham Down; *C. pascuellus*, *ulignosellus*, and *perlellus* are found at the Boiling Wells, near Stapleton; *C. chrysonuchellus* amongst *Helianthemum*; *C. selasellus* and *contaminellus* occur on the bank of the river Avon, near Sea Mills, where also *Schænobius forficellus* may be taken. *H. nimbella* (*saxicola*?) is frequent on railway banks, &c.

Ephestia semirufa occurs at Leigh, and *E. artemisiella* used to be taken at Stapleton, but is now very scarce. *Phycis betulella* is sometimes common at Leigh, and *P. Roborella* at Brockley, where its rare ally, *P. abietella*, is also occasionally found. Five species of *Rhodophæa* are met with near Bristol, including *suavella*, *marmorella*, and *advenella*. *Oncocera ahenella* is sometimes common on Durdham Down, and *Meliphora grisella* is often too abundant in bee-hives.

We are unable, at present, to state how many *Tortrices* have been found in our district, but the following are some of the most interesting :—

Sarrathripa revayana is widely distributed throughout the district, but is nowhere common. *Halias prasinana* is common among oaks, but is our single representative of its genus, neither *quercana* nor *chlorana* having been yet met with. In the genus *Tortrix*, several good species are found. The local *Catoptria aspidiscana* occurs near Bristol; *Dicrorampha plumbagana* is not uncommon; *Oxygrapha scabrana* is rare on Durdham Down; *Teras caudana* is found throughout the district; *Semasia obscurana*, *Retinia Buoliana* and *pinivorana*, and *Hensimene fimbriana* are found at Brockley and other places in the neighbourhood. *Carpocapsa splendana* is sometimes common in the larvæ state in acorns, and *C. funebrana* also occurs here. *S. ictericana*, *Cnephasia abrasana*, *Euchromia purpurana*, *ericelana*, and *striana*, and *Orthotænia antignana*, all occur near Bristol. *Eriopsela fractifasciana*, *Argyrolepis Baumanniana*, *subbaumanniana*, *badiana*, and *dubrisana* are also met with. Of the pretty genus *Eupæctlia* we have ten species, including *dubitana*, *sodaliana*, *curvistrigana*, *griseana*, *rupicola*, *sub-roseana*, &c. *Anchylopera ramana*, *Para-*

mesia aspersana, *Semasia obscurana*, *Asthenia strobilana*, and *E. nigrocostana* may also be named as good local *Tortrices*.

Our district is particularly rich in *Micro-lepidoptera*, but as our space is limited, we can only name here a few of the most rare and interesting species. *Diplodoma marginipunctella* and *Xysmatodorna melanella*, are occasionally found; *Teichobia Verhuelleta*, *Nemotois scabiosellus* and *cupriacellus*, and *Incurvaria tenuicornis* may sometimes be met with. Of the genera *Depressaria* and *Gelechia*, many good species are found here, including the local *D. pastinacella* and *G. Sircomella*. The rare *Æcophora Lambdella* has once or twice been taken in the neighbourhood, and *Æ. unitella* occurs at Leigh, where also the pretty little *R. Erxlebella* may be found, on lime trees. Of the extensive genus *Coleophora* many local species are found here, including *C. deauratella*, *Ibipennella*, *ochrea*, *apicella*, and *fuscocuprella*. Many local species of *Elachista*, *Buccalatrix*, *Nepticula*, &c., &c., may also be taken in the neighbourhood.

Of the *Pterophori*, 18 of the 34 British species occur near Bristol, and probably some additional species may yet be found if properly searched for.

HEMIPTERA.

The Bristol District, comprising within its circuit so many favourable localities for the Botanist and Entomologist, ought to produce a fair list of *Hemiptera*, and would doubtless do so were this particular branch of Entomology well worked. Up to the present time, however, it has received but little attention, therefore our known species number but few. Among some of the more local may be named *Æliodes inflexa*, *Zicrona*

cærulea, *Acanthosoma griseum* and *pictum* (on birch), *Deræxaris Ticinensis* (by Mr. Reed), *Cyllocoris histrionicus*, &c., which may be found at Leigh. *Psallus distinctus* is the only local representative of its genus yet recorded. The rare *Salda pilosa* has been found on the Severn Bank, under seaweed. *Notonecta maculata* is occasionally found at Ashton.

Of the *Homoptera*, the rare and curious *Ledia aurita* occurs at Portbury; *Macropsis lanio* and *Jassus attenuatus* may be taken at Shirehampton; and *Tettigonia viridis* is not uncommon at Stapleton, on marshy ground. Many other rare and local species occur on the Downs, and in Leigh Woods.

BOTANY.

The Flora of the Bristol district contains an unusually large proportion of the flowering plants of Great Britain. It is not often that there are to be found within a moderate distance of a large city so great a variety of localities that a Botanist would desire for his researches,—a wide stretch of sea-shore, in some places rocky, in other shingly, banks of rivers, salt marshes and fresh-water marshes, large tracts of alluvial soil, land under almost every form and degree of cultivation, commons, moors, woods, and elevated table-lands. In fact, with the exception of mountains and bogs, there is almost everything that could be desired, and none of it beyond the limits of a good walk. The levels vary from the sea-shore at the mouth of the Avon to the summit of Dundry Hill, one of the outlyers of the Cotswold Range, seven hundred feet high.

From the account of this district given by the Geological Section of the Bristol Naturalists' Society, it will be seen also that the different strata that lie on the surface give promise of a rich and varied flora. All these circumstances taken together make it evident that in this district the Botanist has advantages that are to be met with in few other localities in the country.

The number of flowering plants amount to at least 791. This enumeration includes, of course, sub-species and important varieties, as well as forms that are universally recognised as distinct species. The Orders that are best represented are the following:—

Ranunculaceæ	..	27 forms	Dipsacæ	...	...	all forms
Papaveracæ	...	6	„	Solanacæ	...	all
Cruciferæ	...	41	„	Scrophulariacæ	...	35
Malvacæ	...	all	„	Labiatae	...	35
Geranicæ	...	14	„	Boraginacæ	...	14
Leguminiferæ	...	47	„	Plantaginacæ	...	5
Onagrææ	...	9	„	Urticacæ	—all the	
Crassulacæ	...	9	„		species but not all	
Umbelliferæ	...	34	„		the sub-species	
Rubiaceæ	...	11	„	Lemnaceæ	...	4

The order Rosacæ, and the genera Hieracium and Salix, have not been sufficiently worked up. The Cyperacæ are only moderately represented, the Gramineæ fairly; no rare forms are found in this district.

In Watson's Cybele Britannica, the flora of Great Britain is arranged according to the zones of climate over which the different plants are distributed. The whole surface of Great Britain is divided into six zones, corresponding to the joint effects of latitude and height above the sea level. The land on which corn is culti-

vated is called the Agrarian Region, and is divided into the three equal portions :—1. The Infer-Agrarian Zone ; 2. The Mid-Agrarian Zone ; 3. The Super-Agrarian Zone. The parts above this in altitude, or northward in latitude, are called the Arctic region, and these too are divided into three zones, 4 the Infer, 5 the Mid, and 6 the Super-Arctic Zones.

Watson's Enumeration in the Compendium only contains 707 of the 791 forms according to the London Catalogue, and their distribution, according to the number of zones in which they are found, reckoning upwards, is as follows :—

ZONES.									
Agrarian	{	1	-	-	-	-	-	-	58 species
	{	1	-	2	-	-	-	-	174 „
	{	1	-	2	-	3	-	-	318 „
Arctic	{	1	-	2	-	3	-	4	66 „
	{	1	-	2	-	3	-	4	62 „
	{	1	-	2	-	3	-	4	29 „

In the London Catalogue the whole of Great Britain is divided into 112 counties and vice-counties, and the number of these in which each plant is found is placed after each name. The following is a list of the rarer Bristol plants found only in 20 or fewer divisions :—

Helleborus foetidus
Meconopsis Cambrica
Arabis stricta
Draba muralis
Thlaspi perfoliatum
Hutchinsia petraea

Helianthemum canum
 „ *polifolium*
Dianthus caesius
Lavatera arborea
Tilia parvifolia
Geranium rotundifolium

<i>Erodium moschatum</i>	<i>Calamintha Nepeta</i>
<i>Ulex nanus</i>	<i>Stachys ambigua</i>
<i>Medicago minima</i>	<i>Primula elatior</i>
<i>Lotus angustissimus</i>	<i>Polygonum dumetorum</i>
<i>Vicia bithynica</i>	<i>Neotinea intacta</i>
<i>Lathyrus hirsutus</i>	<i>Asparagus officinalis</i>
<i>Potentilla verna</i>	<i>Fritillaria meleagris</i>
<i>Rubus fusco-ater</i>	<i>Ornithogalum pyrenaicum</i>
„ <i>radula</i>	<i>Scilla autumnalis</i>
<i>Pyrus pinnatifida</i>	<i>Allium sphaerocephalum</i>
<i>Epilobium lanceolatum</i>	<i>Carex digitata</i>
<i>Callitriche autumnalis</i>	„ <i>humilis</i>
<i>Sedum rupestre</i>	„ <i>Cederi</i>
<i>Trinia vulgaris</i>	<i>Alopecurus bulbosus</i>
<i>(Eranthe pimpinelloides)</i>	<i>Polypogon monspeliensis</i>
<i>Sonchus palustris</i>	<i>Briza minor</i>
<i>Hieracium Gothicum</i>	<i>Bromus madritensis</i>
<i>Veronica triphylla</i>	<i>Asplenium lanceolatum</i>
„ <i>spicata</i>	<i>Polypodium Robertianum</i>
„ <i>hybrida</i>	<i>Equisetum pratense</i>
<i>Orobanche caryophyllacea</i>	

The following list consists of the plants found in this district, to which numbers are not attached in the London Catalogue :—

<i>Ranunculus Drouettii</i>	<i>Viola tricolor</i> var. <i>arvensis</i>
„ <i>trichophyllus</i>	„ <i>canina</i> var. <i>flavicornis</i>
„ <i>Baudottii</i>	<i>Medicago sativa</i>
<i>Corydalis lutea</i>	<i>Linum usitatissimum</i>
<i>Brassica Napus</i>	<i>Sagina apetala</i>
„ <i>Rapa</i>	<i>Hypericum calycinum</i>
<i>Hesperis matronalis</i>	<i>Tilia intermedia</i>
<i>Cheiranthus Cheiri</i>	<i>Geranium phæum</i>
<i>Barbarea præcox</i>	<i>Ononis arvensis</i> var. <i>repens</i>
<i>A Armoracia rusticana</i>	<i>Acer pseudo-platanus</i>
<i>Lepidium draba</i>	<i>Trifolium pratense</i>
<i>Isatis tinctoria</i>	„ var. <i>sylvestre</i>

<i>Vicia sativa</i>	<i>Thymus serpyllum</i>
<i>Prunus domestica</i>	„ <i>Chamaedrys</i>
<i>Rubus macrophyllus</i>	<i>Leonurus Cardiaca</i>
„ <i>Koehleri</i>	<i>Lamium maculatum</i>
„ <i>corylifolius</i>	<i>Anchusa sempervirens</i>
<i>Rosa stylosa</i> var. <i>systyla</i>	<i>Borago officinalis</i>
<i>Epilobium tetragonum</i>	<i>Chenopodium album</i> var. <i>viride</i>
<i>Oenothera biennis</i>	<i>Ceratophyllum aquaticum</i> var.
<i>Myriophyllum spicatum</i>	<i>demersum</i>
<i>Ribes grossularia</i>	<i>Parietaria diffusa</i> var. <i>fallax</i>
<i>Sedum Telephium</i> var. <i>pur-</i>	<i>Urtica pilulifera</i>
<i>purascens</i>	<i>Quercus robur</i> var. <i>pedunculata</i>
„ <i>album</i>	„ <i>sessiliflora</i>
„ <i>dasyphyllum</i>	<i>Salix purpurea</i> var. <i>Woolgariana</i>
„ <i>reflexum</i>	„ <i>rubra</i> var. <i>Helix</i>
<i>Sempervivum tectorum</i>	„ <i>Smithiana</i>
<i>Helosciadium nodiflorum</i> var.	„ <i>ferruginea</i> var. <i>rugosa</i>
<i>repens</i>	„ „ var. <i>acuminata</i>
<i>Petroselinum sativum</i>	<i>Potamogeton natans</i>
<i>Centranthus ruber</i>	<i>Zannichellia palustris</i>
<i>Carduus Hybridi</i> var. <i>Gibsoni</i>	<i>Habenaria bifolia</i>
<i>Matricaria parthenium</i>	<i>Galanthus nivalis</i>
<i>Artemisia maritima</i> var. <i>gallica</i>	<i>Tulipa sylvestris</i>
<i>Inula Helenium</i>	<i>Ornithogalum umbellatum</i>
<i>Erigeron canadensis</i>	<i>Allium Ampeloprasum</i>
<i>Tragopogon porrifolius</i>	<i>Luzula multiflora</i> var. <i>congesta</i>
<i>Taraxacum officinale</i> var. <i>Dens-</i>	<i>Juncus compressus</i>
<i>leonis</i>	<i>Phalaris canariensis</i>
<i>Hieracium murorum</i>	<i>Phleum pratense</i> var. <i>nodosum</i>
„ <i>vulgatum</i>	<i>Lagurus ovatus</i>
„ „ var. <i>maculatum</i>	<i>Agrostis alba</i> var. <i>stolonifera</i>
<i>Vinca major</i>	<i>Festuca rubra</i> var. <i>duriuscula</i>
<i>Verbascum Blattaria</i>	„ <i>pratensis</i> var. <i>lioliacea</i>
<i>Antirrhinum majus</i>	<i>Aspidium aculeatum</i> var.
<i>Linaria Cymbalaria</i>	<i>lobatum</i>
„ <i>Pelisseriana</i>	<i>Chara hispida</i> (our common
<i>Mentha rubra</i>	species)
„ <i>gentilis</i>	

The plants in this list are not necessarily rare, they are given here as a contribution towards the information necessary to have them marked like the rest of the Catalogue.

The only plants found in this district and nowhere else in Britain are *Arabis stricta*, *Dianthus cæsius*, *Allium sphacrocephalum*. The Ferns are 24 in number, but none of them are of special interest.

There are no *Lycopodiaceæ* nor *Marsileaceæ*, four of the *Equisetaceæ*, and one of the *Characeæ*.

Mosses, as many as 47 species, have been gathered in one afternoon in Leigh Woods. *Grimmia orbicularis*, an extremely local species, is found abundantly on Durdham Down, near the Gully.

The following is a list drawn up by Mr. Leipner, that appeared in the Proceedings of the Bristol Naturalists' Society :—

<i>Phascum cuspidatum</i>	<i>Ceratodon purpureus</i>
<i>Pleuroidium subulatum</i>	<i>Leptotrichum flexicaule</i>
<i>Wessia viridula</i>	<i>Trichostomum rigidulum</i>
„ <i>mucronata</i>	„ <i>crispulum</i>
„ <i>cirrhatta</i>	<i>Barbula cavifolia</i>
<i>Dicranella varia</i>	„ <i>aloides</i>
„ <i>heteromalla</i>	„ <i>unguiculata</i>
<i>Dicranum fuscescens</i>	„ <i>fallax</i>
„ <i>scoparium</i>	„ <i>vinealis</i>
<i>Leucobryum glaucum</i>	„ <i>convoluta</i>
<i>Fissidens bryoides</i>	„ <i>tortuosa</i>
„ <i>pusillus</i>	„ <i>muralis</i>
„ <i>incurvus</i>	„ <i>d. rupestris</i>
„ <i>adiantoides</i>	„ <i>b. incana</i>
„ <i>taxifolius</i>	„ <i>subulata</i>
<i>Pottia truncata</i>	„ <i>latifolia</i>
<i>Didymodon rubellus</i>	„ <i>ruralis</i>

Cinclidotus riparius	Thuidium tamariscinum
„ b. terrestris	Isothecium myurum
„ fontinaloides	Homalothecium sericeum
Grimmia apocarpa	Brachythecium glareosum
„ orbicularis	„ rutabulum
„ pulvinata	„ populeum
Racomitrium lanuginosum	Eurhynchium myosuroides
Zygodon viridissimus	„ circinnatum
Orthotrichum arifolium	„ striatum
„ saxatile	„ striatulum
„ affine	„ piliferum
„ diaphanum	„ praelongum
Tetraphis pellucida	„ Stokesii
Eucalypta vulgaris	„ Swartzii
Funaria hygrometrica	„ pumilum
Leptobryum pyriforme	Rhynchostegium tenellum
Bryum carneum	„ confertum
„ atropurpureum	„ murale
„ coespitium	„ rusciforme
„ argenteum	Thamnum alopecurum
„ capillare	Plagiothecium denticulatum
Mnium undulatum	„ sylvaticum
„ rostratum	Amblystegium serpens
„ hornum	„ riparium
Atrichum undulatum	Hypnum stellatum
Pogonatum aloides	„ fluitans
Polytrichum formosum	„ cupressiforme
„ juniperinum	„ b. filiforme
„ commune	„ molluscum
Fontinalis antipyretica	„ cuspidatum
Neckera crispa	„ purum
„ complanata	Hylocomium splendens
Homalia trichomanoides	„ squarrosum
Leskea polycarpa	„ triquetrum
Anomodon viticulosus	

The following list of *Desmids* is taken from a paper

read by Mr. W. W. Stoddart, before the Bristol Naturalists' Society.

Mr. Stoddart remarks that though Desmids do not like a limestone soil, yet the list he was able to lay before them proves that the Bristol Naturalist has a tolerably fair field for his searching powers.

<i>Anthrodesmus convergens</i>	<i>Desmidium Swartzii</i>
„ <i>incus</i>	<i>Docidium baculum</i>
<i>Closterium lanula</i>	„ <i>nodulosum</i>
„ <i>acerasum</i>	<i>Euastrum ansatum</i>
„ <i>costatum</i>	„ <i>binale</i>
„ <i>didymotocum</i>	„ <i>didelta</i>
„ <i>Ehrenbergii</i>	„ <i>elegans</i>
„ <i>Leibleinii</i>	<i>Hyalotheca dissiliens</i>
„ <i>moniliferum</i>	„ <i>mucosa</i>
„ <i>rostratum</i>	<i>Micrasterias denticulata</i>
„ <i>striolatum</i>	„ <i>rotata</i>
„ <i>setaceum</i>	„ <i>truncata</i>
<i>Cosmarium attenuatum</i>	<i>Pediastrum ellipticum</i>
„ <i>bioculatum</i>	<i>Penium Brebissonii</i>
„ <i>botrytis</i>	„ <i>digitus</i>
„ <i>Bromeii</i>	„ <i>margaritaceum</i>
„ <i>curtum</i>	<i>Scenedesmus acutus</i>
„ <i>cucurbita</i>	„ <i>dimorphus</i>
„ <i>cylindricum</i>	„ <i>obliquus</i>
„ <i>commissurale</i>	„ <i>obtus</i>
„ <i>cucumis</i>	„ <i>quadricauda</i>
„ <i>crenatum</i>	<i>Sphærozosma excavatum</i>
„ <i>granatum</i>	<i>Spirotoenia condensata</i>
„ <i>margaritiferum</i>	<i>Staurastrum alternans</i>
„ <i>ornatum</i>	„ <i>asperum</i>
„ <i>Thwaitesii</i>	„ <i>brachiatum</i>
„ <i>tetraophthalmum</i>	„ <i>cyrtocerum</i>
„ <i>undulatum</i>	„ <i>controversum</i>

<i>Staurostrum dilatatum</i>	<i>Tetnemorus granulatus</i>
„ <i>dejectum</i>	„ <i>Brebissonii</i>
„ <i>hirsutum</i>	<i>Xanthidium armatum</i>
„ <i>margaritaceum</i>	„ <i>aculeatum</i>
„ <i>paradoxum</i>	„ <i>Brebissonii</i>
„ <i>sex-costatum</i>	„ <i>fasciculatum</i>
„ <i>tetracerum</i>	„ <i>octocorne</i>

FUNGI.

Bristol produces a sufficient number of rare and beautiful forms to render it very interesting to the mycologist, especially to such as look further than for outward beauty, and can admire minute structure and microscopic detail. In illustration of the nature of the district around Bristol, we may instance Nightingale Valley and the adjacent Down and Leigh Wood, on the mountain limestone, which afford some of the best spots for the mycologist. The locality marked in Swete's plan of the physical aspects of the district (in the "Flora Bristolensis") as "the lesser or Western Plateau," and its range continuing on to Clevedon, has yielded among its mycological treasures the beautiful *Agaricus (Russula) auratus*, Fr., in Leigh Wood; several species of the tribe *Amanita*, the rare *Agaricus Loveianus*, B., which grows parasitically on *Agaricus nebularius*, Batsch, discovered by Mr. H. O. Stephens in Leigh Wood. The rare truffle, *Hydnangium carotæcolor*, B., also found by the same botanist growing in Leigh Wood, and resembling little bits of carrot—hence easily recognised by its colour as it lies among the ivy

and low herbage. Another rarity, *Octaviania Stephensii*, Tulasne, so named in honour of its discoverer, may be found concealed beneath the dead leaves of *Tilia parvifolia* in parts of Leigh Wood, the only other locality known for it being the Lime Woods near Naish House, Wraxall. This truffle is remarkable for its white milk, which runs out when the plant is cut. *Tuber excavatum*, Vitt., and *T. puberulum*, B., occur also in Leigh Wood. *Polyporus Stephensii*, B., grows on dead twigs of Privet in the same locality. The rare *Dædalea confragosa*, P., used to grow on trees on Leigh Down, where numerous other species occur, the fine *Clavaria pistillaris*, L., and *C. Ardenia*, Sow., among them.

On Swete's Northern Plateau, *Agaricus (Hygrophorus) leporinus*, Fr., used to occur, and, proceeding northwards, at Stoke House or Druid Stoke, *Tuber macrosporum*, Vitt., occurred first for Great Britain, near which place *Stephensia bombycina*, Tul., used to grow in tolerable abundance, being named after the botanist before alluded to by M. Tulasne.

Near Stapleton, by the mill on the Frome, under *Bryum horneum* on the rock, a curious little fungus may be met with, *Cenococcum geophilum*; it resembles small shot, but has never yet been found with perfect fruit. If the botanist return through Stapleton Grove, he may find some rarities there, the elegant *Agaricus mucidus*, Fr., is seen at times on the stems of the beech trees; rare *Hypogæi* occur under the dead leaves, e.g., *Genoa verrucosa*, Vitt., *Hydnobolitis cerebriformis*, Tul., and two or three species of *Tuber*, *Hymenogaster*, &c. In a narrow plantation in Stoke Park the rare *Sistotrema confluens* once occurred.

Another excursion may be mentioned, which wil

reward the mycologist, if he be in luck: it is to the woods on the Pennant rock extending from Hanham to Conham, on the Avon. The train may be taken to Keynsham, whence a short walk leads to the Hanham Ferry, and about half a mile further on, returning towards Bristol, the ground to be searched commences, by some heathy spots and old quarries. Several of the red *Pezizæ* occur on the slopes; on the wet sides of the quarries some good Algæ, such as *Cosmaria*, &c., occur; on the flat heath above, the curious little *Marasmius impudicus*, Fr., may be found, where also the beautiful *Agaricus (Hygrophorus) calyptræformis*, B., used to be plentiful, but the habitat has been almost destroyed to grow potatoes, an attempt which seems to be a failure, as the ground is returning to its former condition. In the woods further on, the rare *Strobilomyces strobilaceus*, B., was found, two or three years ago, on a spot which had been searched over by mycologists for many years, but this fungus had never been seen there before. This fact shows the difficulty of ascertaining the extent of the mycological flora of a neighbourhood, the exceptional appearance of a species, however, holds out hopes to the cryptogamic botanist of alighting on new forms when least expected, which can hardly occur to those who confine their attention to the higher vegetables.

Hanham Woods have yielded several rarities among the more obscure tribes, *Pachyphælus citrinus*, B., *P. conglomeratus*, B., the only habitat known in Great Britain. *Sphærosoma ostiolatum*, Kl., *Genea hispidula*, B., *Tuber puberulum*, B., often infested with the parasitic *Hypocrea inclusa*, Br., *Tuber dryophilum*, Tul., and *Boletus parasiticus*, Bull, may be mentioned among the

rarities. For a fuller account we must refer to Mr. Broome's notes in Bristol Naturalists' Society Proceedings, vol. I., part 2, and to his papers in the *Annals and Magazine of Natural History*; or for a list of species consult that of Rev. W. Crotch, in *Somersetshire Archæological and Natural History Society Proceedings* for 1852.





BRISTOL AND ITS ENVIRONS.

SECTION XI.

The Environs.



NO VESTIGE of mediæval domestic architecture is discoverable in Clifton; and though the existence of a church here for several centuries is sufficient evidence of some population, yet we believe no tangible relic of occupation is to be found of any date between the departure of the Romans and the seventeenth century.

There can be no doubt that Clifton is the parent of Bristol, for though traces of the Roman invader have been detected at the latter place, yet the earlier footsteps of the rude Briton are still to be seen at the former. The defensive earthwork, or, as it is commonly termed "camp," on the Observatory Hill, together

with the related works on the opposite side of the river, are considered by antiquaries to have been thrown up by the Belgic British before the Roman conquest of the country. These works are respectively known by the names of Clifton, Bower Wall, and Stokeleigh Camps, the first of the two latter being on the southern summit of the deep glen called Nightingale Valley, and the second on the opposite point of the same ravine.

Bower, or *Borough Walls Camp*, existed a few years since in its original state, but has been deliberately and wantonly destroyed only recently. It exactly resembled the fortified post of Caractacus, which was described by Tacitus* "to have been a situation surrounded by difficult hills, and if on any side the approach was easy, he piled up stones in the form of a rampart; and a river of uncertain depth flowed by the frontier of the place." It was triangular in form, and protected on two of its sides by the natural acclivities of its elevated situation; the remaining side was defended by a vallum, consisting of a double fosse and triple agger, which appears to have been raised by stones piled up on it, and then calcined into lime, the work of a later period. The area within the vallum was about seven acres.

Stokeleigh Camp, on the opposite point of Nightingale Valley, is like in character to Bower or Borough Walls Camp. It measures 12 feet in height above the area, and is drawn curvilinearly from the northern declivity of the ravine just named, to the top of the descent of the next combe, a distance of 225 yards. A second and stronger vallation, in places 30 feet above the bottom of the fosse, is drawn concentrically within

* *Annals*. xii. 33.

the first. The ruins of a stone wall, four feet thick, constructed without mortar, are visible along the top of this inner vallum. A third and smaller rampart is, or rather was, within the two former. Both ditch and mound are now picturesquely overgrown with trees and rank vegetation, and the view between the ramparts, arched over with meeting foliage, is like the vista through a narrow umbrageous glen, so considerable are the dimensions of this work.

The outlines of the station on the Clifton side, notwithstanding the incessant traffic over its remains, are still comparatively perfect. Its situation is about 300 feet above the bank of the river, the precipice forming its defence on the western side. Its remaining circuit is secured by two artificial ditches, forming three ramparts, the inner of which is about 300 yards in compass from cliff to cliff. The principal entrance was on the north-east side, with two narrow footways close to the summit of the precipice, the one at the western, the other at the southern point. From the point at Clifton a beacon fire might be distinguished at the related stations of Kingsweston, Blaise Castle, Knoll and Old Sodbury.* We will parenthetically mention the system of Camps to which those of Clifton are related.

Kingsweston Camp, three miles N. from Clifton, consists of three banks and ditches, that conform to the natural shape of the ground. It is about 100 yards from S.E. to N.W. and 64 from S.W. to N.W.

Blaise Hill consists of two banks and ditches, with a stone road called the Foss-way, leading up to the north-east side, at the top of which is an entrance, another entrance being towards Kingsweston Hill.

* Seyer, 61 ; Barrett, 10 ; Archælog. xix., 172

Knoll Park, near Almondsbury, commands an extensive and unintercepted view of the Severn. The earth-work coincides with the shape of the ground, and Knoll House is built within its area. The entrance seems to have been at the north-east end.

Elberton, nearer the Severn, "stands on a projecting point of the same level as that on which Knoll stands." It consists of two banks with a ditch between them, and is a parallelogram of about 100 yards.

At *Oldbury*, a quarter of a mile from the Severn, many Roman coins have been found; it at present consists of two sides of a square, the other parts having been levelled. The church is built within the area of the entrenchment.

Abby is a much mutilated work standing near the eleven milestone in the road from Bristol to Gloucester. *Bloody Acre*, the next station, is at Tortworth, and has been planted with trees. Nearly in a line with Blaize Castle to Old Sodbury is another on Bury Hill, about a mile from Winterborne. It has two ramparts with a fosse between, and is about 200 yards long and 100 broad. Near Dyrham is *Hinton Hill*, where there is a camp enclosing 20 acres. This was occupied in A.D. 577 by Ceawlin, the third king of Wessex, who here defeated the Britons in a battle that decided the fate of South Britain. Three native kings, Cornail, Condidan, and Farinmail were killed in the fight, and as a further result the three important cities of Gloucester, Cirencester, and Bath, were taken by the Saxons.* "This,"

* Anglo-Saxon Chron., Turner's Anglo-Saxons, i. 162.

Guest's Early Eng. Settlements in G. Britain, Pro. Arch. Inst.,
Salisb., 71.

says Dr. Freeman, "was the last heathen conquest waged by the West Saxons against the Britons."*

Little Sodbury, four miles east from Yate, is "an undoubted Roman work." From its position, says Mr. Grover, "on the crest of a lofty ridge, whose steep slope is to the west, we see at a glance that the advance of the Roman army was from south-east to north-west, and that the line of their approach was that of the same ridge of hills, extending north-east from Keynsham. By the position of the camps on the other or Cadbury ridge, we see the line of the defenders, who were falling back on the Bristol Channel and Wales."†

Sodbury Camp is an oblong about 300 yards long and 200 yards broad. Queen Margaret took up her position on this hill, on her march from Bristol to Tewkesbury, but was dislodged by Edward IV., who personally encamped on the same spot for one night.

Horton and *Westridge* succeed Sodbury; when we come to Stinchcombe Hill, which commands a prospect famous for its extent, including in its range the broad estuary of the Severn, and the Malvern and Welsh hills. On the highest point are three banks and ditches.

Uley Bury, the next entrenchment, is one of the largest and most remarkable of the series. It stands 823 feet above the sea, and covers 32 acres. It was held by the Romans, but had been previously occupied by the British. There is a famous series of ancient sepulchral stone chambers near the spot.

On *Broadridge Green*, above Harefield, is an earthwork about 900 yards long, to which responds *Painswick Beacon*, on the highest point of the Cotswold Hills

* Arch. Jml., xvi., 106, Guest and Freeman, Norm. Conq.

† Jour. Brit. Arch. Assoc., March 31, 1871.

This chain of forts stretched on to Bredon hills, and, inasmuch that some of them are unquestionably Roman works, and others bear traces of having been adopted by the Romans, it appears probable that this is the line of stations referred to by Tacitus, who says that Ostorius Scapula (who succeeded Aulus Plantius in the government of Britain about A.D. 50), in order to keep in subjection the conquered territories, and to repel the irruptions of the tribes beyond, established a system of fortresses between the Avon and Severn, *cinclos castris Antonam et Sabrinam fluvios cohibere*.*

Cadbury Camp, which we have spoken of as having been held by the British to guard the approach to South Wales, is 594 by 561 feet, and contains about 23,000 cubic yards of earthwork, to throw up which would occupy 6000 men 12 hours.†

Cooke's Folly in its original state was simply the ivy draped tower now forming a wing of the picturesque mansion of Dr. Henry Goodeve, who has shown considerable taste in preserving this old legendary building.‡

Opposite Cooke's Folly is a ruinous building which gains dignity from its situation. There is no path to it, a circumstance that Southey thought might afford him an incident for his fancy to work upon in a contemplated poem upon the scenery of Clifton. The ruin upon near inspection is of no architectural pretensions, and seems to have been intended for a summer lodge of the Leigh estate. The walls are about three feet thick, and are of 18th century date.

* Tac. Annales, xii., 31, see *Archaeologia*, vol. xiv., 174.

† Grover.

‡ See Taylor's *Guide to Clifton and its Neighbourhood*.

Abbot's Leigh, so called from having formerly belonged to the Abbots of St. Augustine, Bristol. On the dissolution of that Abbey, this manor was granted to Paul Bush, the first bishop of Bristol, who in the year 1559 presented the same to Edward VI. By that king it was granted to Sir George Norton, his son and heir. The Nortons have acquired some historic interest from one of the family, a Sir George, having here given shelter to Charles II. upon his perilous flight from the battle of Worcester. The house stood about a quarter of a mile from the present Leigh Court, and nearer the high road. A portion of the wall of the dairy and a small window are incorporated in Leigh Court farm, which now occupies the site of the Old Leigh Court. The King's own narrative, supplemented by other particulars of his stay here is very interesting, but cannot here be given for want of space.* Of the pictures at Leigh Court, Professor Waagen remarks, "though my expectations of this collection had been raised very high, they were far exceeded."†

The venerable elm in front of the George inn, gives evidence, by its wide-spreading, huge, contorted, and knotty root, that it must have been standing when his "sacred majesty" Charles II. here halted on his flight. Behind the inn, and approached by a lane just beyond, is the Abbot's pond, a lonely mere, enclosed by thick foliage.

Leigh Church is a 15th century building, small and unpretending, but well proportioned, and forms with

* See Taylor's Guide to Clifton, p. 63, &c.

† Permission to view the paintings, which can be seen only on Thursdays, must be obtained by personal application at the banking house of Sir Wm. Miles, Corn Street.

the ancient elm and churchyard cross a picturesque village church.

At the rear of the dirty river-side town of Pill is Markham Bottom, a sequestered and well wooded glen of about a mile and a half in length, which on reaching Leigh road is crossed by a bridge. Portbury, two miles beyond Pill, and six and a half miles from Clifton Bridge Station, has a spacious church with a Norman doorway, and some Early English and Perpendicular windows. The massive tower is of the latter style. Two noble yews, from 60 to 70 feet high, are standing in the churchyard. There was anciently a Priory at Portbury, four ruined walls of which yet remain. The house, ~~of the~~ date of Henry VII., is said by the Rev. Thomas Hugo to have belonged to the fraternity of St. John of Jerusalem, and was for only two or three Knights.* There are two ancient earthworks on the hills which overhang the village.

Portishead.—Portishead is situated on an acclivity of wood and pasture, rising boldly and picturesquely out of the Bristol Channel. The parish, consisting of 2050 acres, anciently belonged to the Berkeleys, but was sold with large contiguous possessions to ransom Maurice, Lord Berkeley, who was taken prisoner at the battle of Poitiers (1357). Much of the land belongs now to the Corporation of Bristol.

The church is a beautiful specimen of the singularly effective Somersetshire type. It possesses a nave, a north aisle and chancel, and lofty western tower surmounted by light and elegant pinnacles. The north porch has a parvise or room over the entrance, as occa-

* Som. Arch. Proc., x., p. 22.

sionally found in mediæval churches.* The east window is an example of transition from geometrical to flowing tracery, the rest of the windows being Perpendicular. The upper end of the north aisle has been screened off by a broad arch, having the appearance of a flying buttress, below which was a screen, forming a chapel over the vaults of the Mohun and Fust families, who formerly possessed Capenor Court, within this manor. The font is Norman with Ionic volutes, like those in some Roman capitals. The register of the parish goes back to the year 1542. In the churchyard is a cross with five rows of steps, and a shaft of stone twelve feet high. Opposite the church is the ancient rectory, and contiguous is a monastic barn, supported by buttresses.

The manor-house close by is of the date of Henry VIII. with a turret in the Elizabethan fashion—a very good example of the period.†

Portishead camp is situated on the northern side of the elevated hill, which forms the point of Portishead. Its form approaches that of an irregular rhomboid, the longest diameter being about 400 yards, and the shortest about 200.

On the western side of Portishead hill is Capenor Court, once belonging to a family of that name, but subsequently the residence and property of Sir Edward Fust, Bart. of Hill Court, Gloucestershire, and his heirs in continuance. The family of Fust were descended from John Fust or Faust, an opulent citizen of Mainz, but of imperishable renown as one of the inventors of printing by moveable metal types. He in conjunction

* See Bloxam's *Gothic Architecture* (tenth edition), p. 365.

† Rutter 248. *Som. Arch. Proc.*, vol. x., p. 22.

with Peter Schoffer, opened the first public printing press, the earliest production of which is supposed to be an indulgence of Pope Nicolas V., issued August 12, 1451, of which four copies are known. The celebrated Mazarine Bible was not published until 1456.

Clapton in Gordano is dedicated to St. Michael the Archangel, and as usual to churches of that saint, is placed on an eminence. The tower and nave are Early English. The roof is of oak, of the 15th century, and very perfect. The seats are old as the church, and perhaps rank among the oldest in England. The porch had a staircase, now blocked up, which led to a priest's chamber. There are two hagioscopes, and an Easter altar in a side north chapel. The proportions of the church are Norman, some remains of which style appear in the foundations of the nave and chancel. The manor house close by has a tower over the entrance, bearing the arms of Berkeley and Clapton.

Weston in Gordano, a small village with an ancient church, is one mile from Walton, between Portishead and Clevedon. The name is derived from the family of De Gordano, who had large property in this vicinity.

Weston church has a gallery over the doorway in the porch, the use of which has been a subject of much speculation. The church, which has been beautifully restored, consists of nave, chancel, south porch, tower south-east of the nave, with a chapel east of it attached to the south side of the chancel. The tower is Early English, the rest Perpendicular.*

There are the remains here of an old building, said

* Rutter, 244. Bloxam, 364

to be part of a barn of the 15th century. The present lord of the manor is Sir William Miles, Bart.

Walton Castle, when viewed from the sea, presents nearly the appearance of an imposing mediæval stronghold, but loses much of this seeming prestige on nearer inspection. It stands on a ridge of green hill, which stretches in a north-east direction along the Channel, and dips into the sea at Portishead point. The structure, now a complete ruin, has been pronounced by Mr. Parker to be a house of the period of James I. or Charles I., built in mediæval style. It consists of "an octagonal keep, with a gate house, and a wall of enceinte, with a turret at each angle," but the walls are thin and the details poor. The old Rectory at Walton is a good specimen of the domestic Perpendicular style of the district.*

We now come to *Cadbury Camp*, already adverted to (page 434). The commanding prospect of wood and wold, and pastoral landscape, studded with churches, manor houses and cottages in one direction, and of the broad Severn and Welsh mountains in another, renders this a spot of unusual attraction.

Tickenham Church is an ancient building of mixed architecture. The low chancel arch is of Norman construction. The piers are Early English, as also are some of the windows and the font, others of the windows are square, headed with fine flowing tracery. The west window and the tower are in the Perpendicular style. In the north aisle are the figures of two crossed legged knights in armour, with that of a female

* Som. Arch. Proc., vol. x. p. Parker's Dom. Arch. vol. 3., p. 345. Rutter.

in long robes between them, supposed to represent some of the Tickenham family of Berkeley.*

Tickenham Court is a manor house of the early part of the 15th century, or about the time of Henry IV. The hall is nearly entire, and measures 30 feet by 16. This is at right angles with the second and final remaining side of the quadrangle of which the house formerly consisted. The hall windows are each of two lights with flowing tracery, resembling the Decorated style of the previous century, but the arch mouldings are of the Perpendicular style. The open oak roof of the hall is perfect. The second wing of the house has square headed windows of the same period.†

Clevedon is pleasantly situated on undulating ground in view of an open bay. Like Portishead it has no sand, and consequently is less esteemed than *Weston*, which has an extensive sandy beach and fine parade.

The prospect from Dial Hill, immediately behind the village, embraces a magnificent sweep of scenery. Pathways conduct to points known respectively as the Bonnie View, the Mountain Pass, and Strawberry or Bella Vista Hill.

Myrtle cottage at the end of the old village, was the residence of S. T. Coleridge, during the early part of his married career. It had the recommendation of being but one storey high, only £5 a year rent, and no taxes.

The visitor will be sure not to neglect the plain old church on the hill, in whose chancel the marble tablet of Arthur H. Hallam, the subject of *In Memoriam*,

* Som. Arch. Proc., vol. x., p. 12; Jour. Brit. Arch. Assoc., June 30, 1875, p. 235.

† *Ib.*



COLERIDGE'S COTTAGE, CLEVEDON.



“glimmers like a ghost to the dawn.” This place was selected by his father, not only from the connexion of kindred, being the burial place of his maternal grandfather, Sir Abraham Elton, but likewise, “on account of its still and sequestered situation on a lone hill that overhangs the Bristol Channel.” That lone hill and humble old church, “by the pleasant shore, and in the hearing of the wave,” are believed to have been in Tennyson’s mind when he wrote his musical dirge of—

“Break, break, break,
On thy cold grey stones, O sea.”

out of the simple words of which poem “deep and melancholy, and sounding as the sea, as out of a well of the living waters of love, flows forth all *In Memoriam*, as a stream flows out of its spring.”*

In this church also is buried Hallam the historian—the father of Tennyson’s lamented friend.

Clevedon Court, at the entrance of the village from Tickenham, is a splendid specimen of mediæval domestic architecture. It “is a house of the time of Edward II., or the first half of the 14th century, much altered and added to, and with parts rebuilt, but of which the main walls remain, and the original plan of which may still be traced.† Some of the windows and doorways are of striking interest and beauty. The view from the summit of the wooded hill, on the slope of which the house stands is singularly fine.

Woodspring Priory stands in a flat open country, about

* For the descent of the manor, &c., see Taylor’s “Clifton and its Neighbourhood.”

† Brown’s *Horæ. Subs.*, ii., 42.

five miles north from Weston. The conventual church is now the dwelling of a farmer, the nave serving for a parlour. This priory was founded in 1210, by William de Courtenay, in honour of Thomas-a-Becket, and in atonement for his murder, the founder being a descendant of de Tracy, one of the assassins of the archbishop. The remains of the monastery consist, besides the church, which has a handsome tower 65 feet high, of the principal entrance, the refectory, and the barn or grange, &c. The cloisters were on the south side of the church, but only the outer walls are standing, the area being turned into a garden. The situation is wild and solitary, being near the sea, on a long dreary level which stretches over sands and moor to the ridge at Worle.

Worle Hill is a ridge about three miles long, and a furlong in breadth, and 300 feet in height. On the summit are considerable remains of the fortifications of what has been pronounced to "be an aboriginal British city of very early date." The area enclosed by the inner rampart is about a quarter of a mile in length, and eighty yards in breadth, making an area of about eighteen or twenty acres. Before arriving at the outer rampart, seven ditches are sunk across the ridge of the hill. There are two ramparts, about fifteen feet high, from the bottom of the ditch, composed entirely of stones. Within the enclosure, principally towards the western point, are many curious circles, composed of separate stones, believed to be the foundations of ancient British huts, the superstructures of which, composed of wood and thatch, have perished. Within these circular spaces, human skeletons have been discovered, all of which shew more or less the marks of

deep wounds inflicted by sharp weapons. Arrow heads, and fragments of pottery have likewise been dug up, also large quantities of wheat and barley, with bones of pigs and other animals. No Roman remains have been found, from which absence Mr. Warre concludes "that the place was deserted from the time that Ostorius Scapula took military possession of the country from the Avon to the Parret, in the reign of the Emperor Claudius."

Weston-super-Mare.—This delightful watering-place (twenty miles from Bristol by rail) follows the curve of an open sandy bay, situated opposite the coast of Cardiff. Facing the sea are extensive terraces of handsome dwellings, before which runs a broad esplanade, and collaterally a firm level beach of sand. The place is protected from the north and north-east by Worle Hill; while southward, from two to five miles distance, is a line of hills, comprising Breandown, Uphill, and Hutton Hills.

Uphill Church, Winscombe Church (with a good tower), Loxton Church (with Norman and Early English features), and Christon Church (with ornamental south doorway and tower arches, Norman), we have only space to name. Kingston Seymour should not be forgotten.

Banwell.—The church, a very beautiful specimen of florid Gothic, is believed to have been erected by Bishop Beckington, about the middle of the 15th century. The interior is strikingly handsome, having clustered columns and a groined arched roof, also a fine rood screen.

The limestone hill of Banwell has long been celebrated for its bone caverns, in which have been found the

remains of the bison, rein deer, wolf, cave-bear, fox, panther, glutton, and other animals. At Hutton, three miles west, also at Bleadon and Sandford Hill, have been discovered the bones of the hyæna, wolf, cave-lion, reindeer, Irish stag, and elephant. The femur or thigh bone of an elephant preserved in the Taunton Museum is 22 inches in girth, the tusk 6 feet long and 2 feet in circumference; the skull of a bear is nearly 2 feet long, and the thigh bone 21 inches.

These bones, from the Somersetshire caves, were diligently collected by the late Mr. Beard, and are now preserved in the Taunton Museum, where they form an unrivalled collection of Cave Mammalia. Many are described in the volumes of the Palæontographical Society, to whose beautiful illustrations we may refer our readers.

Beside the bone cave is a stalactite cavern of arduous descent, but of much interest to compensate for difficulty of access. It consists of an "immense apartment, having a majestic arched roof and rocky sides, and containing on its floor huge masses of solid rock. In height it is nearly forty feet, in breadth sixty." The crystalline configurations are exceedingly curious and multiform, and always excite the admiration of the visitor.

Wrington.—Wrington, an ancient market town, situated in a pleasant and fruitful vale, is distinguished not only as the birth-place of the eminent metaphysician, John Locke, but for the possession of one of the finest churches in Somerset. A beautiful oak screen of flower and fret work divides the nave from the chancel. There is a tablet, with a long inscription, to the memory of Hannah More, who, with her sisters, lived at Barley

Wood, on the slope of the adjoining hill. In the churchyard, overshadowed by funereal yew and willow, is a spacious railed enclosure containing her grave, with that of her four sisters. She died 7th September, 1833, aged eighty-eight years. The house in which Locke was born adjoins the churchyard, being the last of a row of humble thatched cottages.

Yatton (12 miles by turnpike or rail from Bristol). The church is a large cruciform structure with a central tower, surmounted by a truncated spire. The interior is lofty and spacious; the arches of the nave are supported by clustered columns, above which, on either side, is a row of clerestory windows, five in each. The nave was rebuilt and the aisles added before 1413, the spire is about fifty years later and was never completed.

At Yatton the Manor-house is so exactly on the same plan as Clevedon Court, that there can be no doubt that it is a copy of it on a much smaller scale, and at a later period; the style is Perpendicular, but early in the style, probably about the same age as Tickenham Court, *circa* 1410.*

Chelvey, one mile from Brockley, has a church with a Norman doorway, and some 13th century windows. The Court is a mansion of the reign of James I.

Backwell is seven miles from Bristol. The church has been lately restored, and is a fine structure. The chancel bends off from the line of the nave, symbolising as is thought, the leaning of the body of our Saviour on the cross. The most curious part of the church is the Rodney Chapel, with its scalloped stone beams, which is very beautiful. There is a large Gothic tomb, with an effigy of the Rodney family, with the date 1536. The

* Som. Arch. Proc., vol. x., p. 30.

rood screen is very handsome. In the churchyard is a cross with three steps.

About a mile distant is Barrow Court, an Elizabethan manor house, originally a Benedictine nunnery, founded in the time of Richard I. It was converted into a dwelling house by John Drew, of Bristol, to whom it was granted on the Dissolution. The church is small, and mostly re-built.

Flax Bourton, $5\frac{1}{2}$ miles from Bristol, has a small church, with windows and tower of the 15th century; but retaining, within the porch, a Norman doorway, with chevron moulding and twisted shafts, and a similar arch that divides the nave from the chancel.

About a mile northwards is Belmont, a beautiful mansion, on a fine wooded acclivity.

On the same range of tree-clad hills is Tyntesfield, the splendid seat of the late George Gibbs, Esq.

About two miles north from Bourton is *Wraxall Church*, a handsome structure in the Decorated style.

The 15th century church of *Long Ashton* has a singularly fine rood screen of oak, and a richly sculptured monument to Sir John Choke and his wife, whose effigies are lying upon it. He died 1556.

Ashton Court, the seat of Sir Greville Smyth, Bart., is screened at the back, like the village itself, by a wooded hill. The front of the mansion is long and low, and was built, in 1634, from the design of Inigo Jones.

Dundry may be reached from Bristol through Bedminster, or from Clifton by way of Long Ashton. The former route is best for vehicles, but the latter is the pleasanter. Dundry Tower is a conspicuous object on the horizon for many miles round. It stands on a ridge of Inferior oolite about four miles long, and 769 feet

above the sea. The church, to which it is attached, has been recently rebuilt, and, like its predecessor, is very small. The height of the tower, including the corner pinnacles, is 100 feet. The date inscribed is 1482. It is a strikingly elegant object, and in perfect preservation. The openwork battlements and turrets are an exquisite finish to its summit. From this summit the view of the surrounding landscape is singularly beautiful and extensive. The eye ranges over an expanse of twelve counties with their manifest diversities of scenery—groves, lawns, fields, forests, and towered cities.

Chew Magna, is about two miles beyond Dundry, six miles south-west from Bristol. The church is large and ancient, and contains many curious monuments to the St. Loe, Strachey, and other families. The church-house, with the arms of St. Loe over the door, bears the date 1510. Sutton Court, the seat of Sir Henry Strachey, Bart., is within this parish. The house is an ancient and spacious edifice in the Tudor style. Leland, the antiquary, is said to have been entertained at this mansion (then occupied by the St. Loe family) during his survey of the surrounding district; and John Locke, the philosopher, used here to visit (c. 1665) his friend, Mr. John Strachey, to whose hospitality he makes several allusions in letters addressed to him from the Continent.*

Chew Stoke, the adjoining parish, has an ancient church and parsonage, the latter very curious, and bearing the date 1429.

Stanton Drew, one mile from Chew, was first noticed in print by John Aubrey, who visited the place in 1664. The stones, for magnitude, are only inferior to those of

* King's Life of Locke, qto. p. 25, &c.

Stonehenge, which, indeed, for multitude, they exceed. Their situation is in a pleasant meadow, surrounded by green undulating hills. The tallest of the stones that remain upright is $12\frac{1}{2}$ feet in perpendicular height, another being 10 feet high and $7\frac{1}{2}$ feet square. The largest recumbent stone is $15\frac{1}{2}$ feet long and 5 feet square. The stones comprise the ruins of three circles, the largest of which was about 115 yards in diameter, the second 43, and the smaller 32 yards.

There are also several scattered stones, one of which stands on the high road. This is called Hautville's Coit, from a tradition that it was coited by Sir John Hautville from Norton Hill, about half a mile off, to the place where it stands. For this feat the manor of Norton was given him, which, thinking too little, he gave the name of Norton Mal-reward, pronounced by the vulgar, says Aubrey, small-reward. Hautville's Coit has been much diminished in substance to serve the exigencies of road mending, but is said by Collinson to be computed to have originally weighed upwards of 30 tons.

The largest circle is marked by 14 stones, more than half of which are prostrate. In the centre is an altar stone, and without the circumference, to the east, five stones of an avenue. The smallest circle lies eastward of the foregoing, and consists of nine stones, four of which are standing: several stones of an avenue attach also to this. South-east of the church is a circle of 43 yards breadth, comprising 10 stones. Three others lie not far from the chancel of the church. Several stones of the outer circles stand on the other side of the hedge, and two or three are sunk into the ditch.

The scattered stones without the circles are vulgarly

called the "Fiddlers," the others being "the maids, or the revel rout attendant on a marriage festival; for the people of this country," continues the learned Stukeley, "have a notion that upon a time a couple were married on a Sunday, and the friends and guests were so profane as to dance upon the green together, and by a divine judgment were thus converted into stones. * * *

I have observed that this notion and appellation of weddings, brides, and the like, is not peculiar to this place, but applied to many other of these Celtic monuments about the kingdom; the Nine Maids, in Cornwall, nine great stones set all in a row; whence possibly one may conjecture in very ancient times it was a custom here, even of the Christians, to solemnize marriages and other holy rites in these ancient temples, perhaps before churches were built in little parishes; and even now they retain, or very lately did, in Scotland, a custom of burying people in like temples, as judging them holy ground, without all doubt continued down from the Druidical times."*

The church at Stanton Drew is small, but ancient, and has a beautiful doorway. The parsonage-house is a fine old building, and was formerly embattled and fortified. It bears the shield of Beckington, Bishop of Wells, who was tutor to Henry VI.

Cheddar.—Cheddar Cliffs, a rent in the mountain limestone of the Mendip chain of hills, have few parallels for magnificence in the kingdom. The celebrated Pass of Llanberis is a mere crumbling ruin of

* Stukeley's *Itinerarium Curiosum*, Cent. II., p. 174. This argument has been recently discussed and confirmed by evidence of various kinds in the learned and able work by Col. Forbes Leslie, on the "Pre-historic Races of Scotland." See vol. I., p. 210, &c.

rocks, but these ranges of cliff are nearly as entire as when cleft by the ancient hand of Nature. There is with them a Dantesque sublimity, and their windings might suggest the precipitous descent to the seventh circle, only that their issue is into pleasanter country than the gloomy drama of the *Inferno* unfolds.

The windings of this valley of rocks extend for more than a mile. About the middle of the pass a stupendous precipice stands abruptly forward, towering perpendicularly to a height of 429 feet. A reverted view of the chasm from a turn a little beyond this point is very impressive. There are several gloomy caverns among the cliffs; one of these has its entrance 100 feet above the road, and it is said to penetrate the rocks full 300 feet. Its roof and sides are covered with stalactites; the interior is torn and rugged, and branches into spacious vaults.

Cheddar Cavern, so-called, exhibits a wonderful combination of stalactites and stalagmites, wrought naturally during the course of ages into numerous fantastic shapes. The charge for admission for a party of from one to three persons is three shillings.

The Market Cross, which is hexagonal and embattled, was restored in 1834.

Cheddar Church, supposed to have been erected about the beginning of the 15th century, is a fine building of the Perpendicular style. The tower has an openwork parapet with corner pinnacles. In the interior is a richly sculptured stone pulpit, one of the finest in the country, and a handsome screen and ceiling of oak. In the chancel are two brasses to the memory of Sir Thomas de Cheddar and his lady Isabel, 1443. Their manor house partly remains, and is now a farm-

house. It stands by the roadside, at the entrance to Axbridge.

Edward the Confessor (A.D. 940), while hunting in the forest of Mendip, had a narrow escape from being dashed to pieces over Cheddar Cliffs.

The Mendips begin on the east near Frome, and from thence continue through the middle of Somerset for a distance of 35 miles, forming the southern boundary of the Somersetshire coalfield. Along the summit ran the Roman road from Old Sarum to the Bristol Channel. They have on their southern escarpments, the towns of Shepton Mallet, Wells, Cheddar, Axbridge, and Weston-super-Mare. The hills are chiefly constituted of the old red sandstone and the carboniferous limestone.* The lead mines have been worked from the earliest historic period. Numerous sepulchral barrows and British earthworks are scattered over the surface, and have been frequently described.† The ancient mining laws of Mendip, A.D. 1470, are very curious. When a miner began his pit or groove, a hole was dug, in which he stood to his waist, and in this position threw his axe, the distance the implement reached forming the radius of the circle within which his work was comprised. The law against stealing was as follows:—"If any man of the occupation do pick or steal any lead or lead ore, to the value of thirteen pence halfpenny, the lord, or his officer, may arrest all his lead or ore, house or hearths, with all his grooves and works, and keep them

* See "Geology of the Mendips," by Ch. Moore, F.G.S., Som. Arch. Proc., 1868-9.

† See a Paper by Rev. H. M. Scarth, Brit. Arch. Assoc. Journl., July, 1875.

as forfeit to his own use, and shall take the person so offending, and bring him where his house or work and all his tools and instruments belonging to the same occupation are, and put him into his house or work, and set fire in all together about him, and banish him from the occupation before all the mineries for ever.”*

Horfield, four miles east of Bristol, possesses a small Perpendicular church, very prettily situated on the elevated green common of the old village, to which is an ascent by fields adjacent to the high road. There are barracks here.

On the same road, three miles beyond Horfield, is *Almondsbury* (one mile from Patchway Station), so called from being the burial place of Alcmund, father of Egbert, first sole king of England. The church is large, and cruciform, with a central tower and spire. The style is Early English, with some Anglo-Norman details of the original building. Some remains of a Roman entrenchment are apparent on the brow of the hill; this was one of a chain of ancient fortresses which extended through the south-western part of Gloucestershire, from Clifton Down to Bredon Hill.† Within the area of the camp is Knoll House, the seat of Sholto Vere Hare, Esq. The timber on this estate is much reputed for its fine growth. A splendid panoramic landscape is unfolded from the brow of Almondsbury Hill, the broad Severn, with the more distant Monmouthshire and Welsh hills, being included in the scene. *Over* is another delightful seat, adjoining Knoll. This once belonged, as did likewise Knoll, to Thomas de Gournay, one of the murderers of King Edward II.;

* Som. Arch. Proc., 1868-9. † Archæolog., Vol. xix., p. 163.

the former he sold before his attainder, the latter was confiscated upon that event.*

Thornbury Castle and Church we cannot here dwell upon. They are of conspicuous beauty and interest.†

Berkeley Castle, seven miles north-east of Thornbury, and two-and-a-half miles south from the Berkeley Road Station, is one of the most perfect feudal castles in England. The keep is Norman, circular in plan, with turrets attached, and an external staircase. The hall (61ft. by 32ft.) retains a late Norman wall on one side, but on the other are some good and rather peculiar square-headed windows.‡ The room in which Edward II. was murdered, is said to be the guard chamber over the Castle dungeon—a place as dark as the deed. King John, Henry III., Queen Margaret, Henry VII., and Queen Elizabeth, are among the royal personages who have stayed at this venerable fortress.

Aust, three miles north from the Bristol side of the New Passage, has an ancient church, memorable for its association with Wycliff, the early reformer, who was here incumbent. To the geologist it is classic ground.

The *New Passage* is three miles across at full tide. Instead of resuming the train at the opposite pier, the tourist may, on his landing from the steam ferry-boat, pursue the margin of the shore to the left of the Black Horse Inn, until he comes to the Roman entrenchment, and the ruined chapel of Sudbrook. The chapel is situated beneath a tuft of trees on the verge of a cliff abruptly rising from the Severn Sea, about half-a-mile

* Fosbroke, vol. I., 488. Rudge, II., 247.

† See Taylor's "Thornbury Castle."

‡ Parker's Dom. Arch., IV., 254.

from the ferry. Very little is related concerning this ruin, but its architecture, rude Early English, would refer its origin to 600 years backward. Adjacent to the chapel, forming two sides of a square, is a Roman entrenchment, consisting of three ramparts with two intervening fosses.

The traveller may now continue about a quarter of a mile further along the shore, and then, leaving the entrenchment to the left, turn off at nearly a right angle towards the village of *Portskewet*. King Harold had here a palace, but its site is unidentified. The ancient church and cross, with the old thatched cottages near, make at this place a picturesque grouping of objects. Mr. Freeman supposes that portions of the church may be as old as the time of Harold. One mile further west is *Caldicott Castle*, an imposing ruin, though lying in a flat pastoral country. Mr. Freeman pronounces this fortress to surpass in masonry and detail every military building he had seen, "being fully equal to the best ecclesiastical work." He proceeds, "the gateway is admirably built, but is perhaps a little too domestic. One of the turrets has some fine machicolations which I have not seen elsewhere, on well wrought corbel heads. The best architectural features are a range of Decorated corridors, in which was probably the hall, and a beautiful Early English fireplace." The history of the Castle is very obscure, even the time of its dismantling being unascertained, but there is evidence to show that it occurred before the days of the Commonwealth. The fortress formerly belonged to the Bohuns, Earls of Hereford, of whom Henry, who died in 1220, is the earliest recorded possessor. He was succeeded by his eldest son Humphrey, a crusader to

the Holy Land. There appears to be no direct prescriptive account of the actual residents. We find incidentally, however, by the Register of Walden Abbey, that two of the sons of Humphrey, the eighth Earl, were born within the walls of this baronial seat. We may therefore infer the occasional residence of that noble here. He was one of the most stirring men in the heroic sports and battles of his turbulent age. In 1307 he was at the tournament held by Piers Gaveston, at Wallingford, where, with other English knights, he was overcome by foreign tilters.* This victory of Gaveston's friends proved the commencement of that favourite's destruction, for the heat of animosity engendered against him was not cooled till quenched in his blood. Against the succeeding favourite of the king, Hugh Spenser the younger, who, with his father, were so powerful that neither "baron nor bishop" could stand in the royal favour against their will, no less indignation was roused, the Earl of Hereford, of whom we speak, proving one of his chief enemies. The immediate occasion of his enmity was as follows :— Sir William Bruce, a rude and insolent knight, possessed the barony of Gowerland, in the March of Wales. This demesne he sold first to Humphrey Bohun, Earl of Hereford, who, having paid the price, discovered that it had been previously sold to the Mortimers, and not only to them, but also to Sir John Mowbray, who, having wedded the daughter and sole heiress of the perfidious Bruce, challenged the land to be his heritage. "Last and worst," says Capgrave, "Hugo Spenser the younger desired those lands and bought them, and

* Capgrave

because he was the King's Chamberlain that sale was most allowed and approved, insomuch that he entered the lands," &c. In the vicissitudes of warfare, Earl Humphrey was taken prisoner at the battle of Stryvelin (7 Ed. II.), but was exchanged for the wife of Robert Bruce, who had long been captive in England. On 16th March, 1321, he was killed at the battle of Borough-bridge, Yorkshire. His lady, two of whose children, as stated, were here born, was Elizabeth Plantagenet, the eighth daughter of Edward I., and the favourite sister of Edward II. She was two years old, and residing at Caernarvon Castle, when her sad-fated brother was born. She was usually his companion. They visited their father's court in company, offered at the same shrines, and were served by the same attendants.* She was first married, at the age of 15, to John, Earl of Holland. Her second marriage, with Earl Humphrey, in 1302, was celebrated with splendid ceremony at Westminster. She had a crown of gold, cast in one piece, studded with rubies and emeralds, valued at £320; surmounting this was a smaller circlet from which gleamed 82 large oriental pearls, 12 rubies, 12 large emeralds, and 24 small images, wrought in gold and gems.† Edward and William, her sons, whom we have mentioned, were twins. Of the first of these not much is told; but William was a distinguished soldier, and one of the gallant heroes of Cressy. Upon the advancement of the Black Prince to the Dukedom of Cornwall, he was created Earl of Northampton (17th March, 1337), and from that period he appears the constant companion in arms of Edward III. and his

* Mrs. Greene's Princesses, II., 5. † ib..

illustrious son. At Cressy (1346), he jointly, with the Earl of Arundel, commanded the second of the three lines of battle, which division consisted of 800 men-at-arms, 4000 halbediers, and 2400 archers. At a critical moment of the fight, nearly 40,000 men were enclosing the little phalanx of the Black Prince. Northampton and Arundel thereupon moved to his succour, and, at the same time, dispatched a knight to the king, who was viewing the fight from a hill where stood a windmill, to ask aid from the royal division, which the king denied, saying that the honour of the day should be his son's alone.* By Richard III., the Castle was granted to Henry, Duke of Buckingham, who was beheaded at Salisbury. His son and successor, Henry, being accused of plotting against the life of Henry VIII., and aspiring to the crown, was, by the intrigues of Cardinal Wolsey, sentenced to death, and beheaded in 1521. On the confiscation of his estates, Caldicott Castle was annexed by the King to the Duchy of Lancaster. Subsequently it was granted to the Earl of Worcester, at the annual rent of £ 52 13s. 4d. The Castle appears to have been long in a state of dilapidation; for, at a court held in 1613, the jury state "they do present, that there is an old ancient castle in Caldicot, and that it is ruinous and decayed: that the cause of the decay thereof they cannot present, for it was before the memory of the jury, or any of them, by whom, or to what value they know not."† Caldicott Church has an interesting wheel window in the north aisle of the chancel.

* For the indication of some of the above particulars the writer is indebted to A. S. Ellis, Esq., Architect, London.

† Coxe, I., 22.

Caerwent, the Venta Silurum of the Romans, and the garrison of the 2nd Augustan Legion, is two miles north of Caldicott. It stands on the Via Julia, which ran from Caerleon through Caerwent to Strigulia or Chepstow, and is now the turnpike road from the latter place to Newport. The remains of Roman fortifications are considerable, scarcely any military post of that people in the country being in a more perfect state. The walls enclose an area of about 40 acres, being in the form of a parallelogram, the dimensions of which are nearly 500 yards by 400. The circuit of the rampart, about a mile in extent and surrounded by a moat, may still be traced. The most perfect remains are those of the south wall, which is to some extent almost entire, and is, in several places, 20 feet high. Three pentagonal bastions existing towards the western end of this wall, were added, according to some archæologists, at a later period than the Roman invasion.

Of *Chepstow Castle* and *Tintern Abbey* cheap hand-books can be obtained on their respective spots.

Two and a half miles north-east of the New Passage, in the contrary direction to Caldicott, is the Park and Mansion of *St. Pierre*, the ancestral seat of the Lewis family. The house is ancient, but has suffered innovations. The gateway "in feudal times was part of the old castellated mansion; it is a Gothic portal, flanked by two pentagonal embattled turrets, and has a very picturesque appearance." The Park, stocked with fine deer, is extensive and very romantic, the ground being capriciously undulating and well timbered; also it commands a beautiful view of the junction of the Wye and Severn.

Nearly opposite the mansion of *St. Pierre* is the great

estuary of the Bristol Channel, which takes the name of Severn from the famous old British story of Sabrina, daughter of Lochrine, celebrated in verse by Spenser, Drayton, and Milton.

Half a mile across the fields, east of St. Pierre, and two miles from Chepstow, is *Moyne's* or *Monk's Court*, consisting of a mansion and turreted gatehouse, the former built by Godwin, Bishop of Llandaff, in 1609, the latter much earlier in date.

Mathern, adjoining Moyne's Court, possesses an ancient church and palace, the latter formerly the seat of the Bishops of Llandaff. Magor Priory Church and Pencoyd Castle, are in the neighbourhood.

WELLS.

The ecclesiastical buildings of Wells are the most complete and interesting in England, and probably in Europe. They consist principally of the Cathedral with its cloisters and chapter-room, the Bishop's Palace, the Deanery, the Archdeaconry, the Vicars' Close, and St. Cuthbert's Church.

Wells has been defined by Mr. Freeman to be a purely ecclesiastical city, of which there are two classes, one of monkish, the other of episcopal origin. Wells was not the seat of an Abbot but of a Bishop. "There never was a monk here," remarks the great authority we have named: "by any chance—our church has always been from its very beginning a foundation of secular priests. This is the great reason why Wells is the very best example to be found in the whole world of a secular church with its subordinate buildings. There is no other place where you can see so many of

the ancient buildings still standing and still put to their own use.”*

The Church of St. Andrew, to which saint the Cathedral is dedicated, is supposed to have been founded by King Ina about A.D. 708, but the see of Wells is believed not to have been established till about A.D. 910. Bishop John de Villula having obtained a grant of Bath from William Rufus, transferred his seat to that city, where he built a new Cathedral, and changed his title to Bishop of Bath, Wells being reduced to a sort of episcopal country seat. His successor Bishop Robert extended the designation to “Bath and Wells,” which title is still retained. The east end of the Cathedral was rebuilt by this prelate, but the only fragment existing of his time (ob. 1165) is the mutilated Norman font. He was succeeded in 1174 by Reginald Fitz Joceline, to whom is assigned the honour of having erected the present west front, though without the figures. He in 1215 gave 10 marks yearly from the Church of Chew, and 20 marks from Coomb, “to maintain a perpetual and solemn service of the Virgin Mary, every day and every hour in the Church of Wells,” and a further three marks to maintain the candle of the Blessed Virgin in the same church. Also two marks yearly to find eight tapers “at the foot of the crucifix on the altar of St. Andrew, to burn while the Divine Mystery is celebrating in the said chapel, on the greater double feasts.”

The front is inferred by Mr. J. T. Irvine, whose singularly able paper we are using, to have been commenced shortly after 1182, and proceeded till about 1191. During the time of the erection of the central part of the nave (about 1280-97), the figures in the

* Som. Arch. Proc., 1873, 21.

west front were being placed, "commencing in the centre and working to the sides, and then gradually downwards."* The central feature, consisting of nine niches containing figures of angels, have been supposed to symbolise "angels, archangels, powers, thrones, dominions, principalities, authorities, cherubims and seraphims."† St. Andrew is the central figure of the front. The inverted arches between the nave and choir were constructed in the first half of the 14th century. They were a daring architectural innovation, and well demonstrate the boldness of the architect in meeting an alarming and unexpected exigency—the necessity of further support to the central tower, which was found to be sinking, and whose fall would have doubtless involved the destruction of the whole building. These unique buttresses were consequently introduced, with a success that five centuries have not impugned.

The exquisite Chapter-house, together with the staircase leading to it, is a finished specimen of the earlier Decorated period. The Lady Chapel is attributed to Bishop Droghensford, who in 1325 obtained an indulgence of forty days for the contributors to the new works of this church.‡

The western towers, among the main body of the façade, are later in date than the rest of the building, being in the Perpendicular style.

The Deanery, on the north side of the Cathedral Green, was chiefly built about the year 1475 by Dean Gunthorpe, chaplain to Edward IV.

The Bishop's palace was originally built by Bishop

* Som. Arch. Jour., 1873, p. 42, &c. † Ferrey, *ib.*, 79.

‡ Som. Arch. Proc., vol. i., p. 76.

Joceline, between 1205 and 1244. It occupies with its pleasure grounds fourteen acres. The gatehouse with its square flanking turrets, groined vaulting, and portcullis grooves, was built by Bishop Ralph of Shrewsbury in the fourteenth century (1329—1365). He also constructed the walls of enclosure, and dug the moat. The dwelling apartments have undergone alterations, but preserve mainly their ancient character. The chief room is the gallery, 80 feet in length, with groined roof and richly carved woodwork.

The Archdeaconry was originally built in the time of Edward I., the gable windows at the east end, and one of the doorways near this end, belonging to that date.

The house of the choir master, at the east end of the cathedral, belongs to the fifteenth century, and is tolerably perfect. The Vicars' Close, or College, is of unique interest. The vicars choral were incorporated by Bishop Joceline, in the beginning of the thirteenth century. The present buildings were erected by Bishop Ralph, of Shrewsbury, in the fourteenth century, and are substantially his work, though they were restored and improved by Bishop Beckington, two centuries later. They form a long parallelogram, having twenty-one houses on each side, with a chapel at the end.

The gatehouses leading to the cathedral green and palace were built by Bishop Beckington, about 1443. He also erected the twelve lofty houses on the north side of the market-place, but they have undergone alteration since his day.

From a balcony in front of the Crown Inn the celebrated William Penn, in the year 1695, addressed the people. In the midst of his discourse he was arrested

by the mayor, who, however, soon released him, on finding that he had Bishop Kidder's licence to hold a religious meeting. The Mermaid Inn, a very old house, is noticed in public records full 350 years ago.*

St. Cuthbert's Church, a first-class specimen of Perpendicular architecture, is believed to have been built in the reign of Edward III. Some frescoes and a superbly carved Jesse altar have been recently discovered within the church.

Wookey Hole, in the Mendip range, is about two miles from Wells. It is a vast cavern, penetrating the hill to an unknown extent,—an unvoyageable body of water, which passes under an arch in the rock at the extreme accessible limits of the cave, preventing further discovery. In the walls of the cavern are many fissures, branching into the hill for a considerable distance. The Hyæna Den is another cavern, on the other side of the stream, which issues from the rock, emerging a second time to daylight; it disappears near Priddy, on the top of the Mendips: after passing through Wookey Hole, it is used for the paper mills below.

• It takes its name from the number of bones and coprolites of that animal which have been dug up from its soil. Of jaws have been found and preserved 131; of teeth, 342, exclusive of the numbers that crumbled to pieces at the touch. With these were exhumed 30 teeth of the elephant, 190 of the rhinoceros, and 362 of the wild horse; besides similar remains, in the same or different layers, of the Irish elk, the bear, the wolf, &c. In an intermediate layer were found some flint spear heads, and other rude implements con-

* Seral's Lecture on the History of Wells.

nected with man.* About Wookey Hole is some very interesting valley and cliff scenery. The Ebor rocks rise to a height of 300 feet, and are a representation on a smaller scale of Cheddar cliffs.

Glastonbury Abbey.—Old historians relate that the earliest church in Britain was here founded by St. Joseph of Arimathea, who arrived hither about A.D. 63, bringing with him twelve companions (and the Holy Grail). This was the mother church of Glastonbury and of all England. Paulinus, another saint connected with the place, covered the walls of the old wicker church with boards, and protected the roof with lead; and thus was preserved for five hundred years the first christian church erected in Britain.

The earlier magnificence of the church was due to Ina, king of the West Saxons. He, it is said, in the year 708 demolished all the old ruined buildings, and raised the abbey anew on a greatly enlarged scale, endowing it with rich manors. Ina's church remained in splendour till the time of the Danes, when it was ravaged. Under Dunstan the monastery commenced a new career. He, upon being preferred by King Edmund to the dignity of abbot, at once proceeded to reconstruct the monastery on an enlarged scale, which he peopled with celibate monks. In 946 Edmund was murdered at a feast of his thanes at Pucklechurch, and his body was brought to Glastonbury and interred in the abbey church in the north of the Presbytery. King Edgar, second in succession to Edmund, was also here interred by Dunstan; and another royal personage

* See an elaborate paper on Wookey-Hole Hyæna Den in the Som. Arch. Proc., vol. xi., p. 195, &c.; also Phelp's Somerset, vol. ii., p. 170, &c.

entombed in the abbey was Edmund Ironside, who died in 1016, and was buried in the south of the Presbytery. King Canute coming to Glastonbury on St. Andrew's day, granted a charter to the monastery. The last Saxon abbot, Egelnoth, was deposed by the conqueror, and one Thurstan, a Norman monk, was placed in his room.

The manor of Glastonbury, together with the house and site of the monastery, church, cloisters, and churchyard, was granted by Edward VI. to Edward Duke of Somerset. Since then it has passed through various hands, and in 1850 the estate was sold for 35,000 guineas. It is now owned by Mr. Austin.

St. Joseph's (or, according to Professor Willis, St. Mary's) Chapel is the completest portion of the ruins, and in style is transition Norman. It occupies the site of the ancient wicker oratory and therefore of the earliest church in England. The chapel, indeed, is a repetition in stone of the primitive wattled structure, the curious intersecting ornamentation being a kind of studied reproduction of the intertwined osiers. St. Joseph's chapel is 118 feet in length by 40 feet in breadth. The mouldings of the deeply recessed north and south doorways are of the medallion character, and peculiarly elaborate. As it was first built in 1184 "it was an isolated rectangular edifice of four bays," but it was brought into connection with the great church by an early English addition of three bays, containing a broad flight of steps up to the west door, added to give access to the church from the old cemetery of the monks, on the south, and that of the laity on the north: and later still the east wall of the chapel was pierced with a large arch, under which stood the altar with a

reredos behind.* The crypt is later in construction, and belongs to the fifteenth century, being provided as a place for the interment of distinguished persons. A well, coeval in date with the chapel, with an ornamental arch over its mouth, is now reached from the crypt, but was once outside the chapel wall.

Of the great church, also transition Norman, the most striking remains are the two tower piers, which, with the side chapels, the south wall of the choir aisle, and some isolated bays of the south nave aisle all of Doult-
ing stone, belong to the church of Henry II., and to the date of about 1184. The tower was supported, as at Wells, by inverted arches, the work of Beere, the last abbot but one. The great church was 410 feet long by 90 feet broad, making, with St. Joseph's Chapel, a total length of 528 feet, or two feet less than Winchester, our largest cathedral.

The resuscitation of interest in the ancient romances, of which the renowned Arthur is the central figure, supplies an additional incentive for a visit to this interesting spot, once Insula Avalonia, now Glastonbury.

The Abbey Records (*i.e.*, the *Parvus Liber* and the *Magna Tabula Glastoniensis*) give an account of the discovery of the remains of King Arthur and his queen by Henry II., in the year A.D. 1170. This statement is repeated and confirmed by Giraldus Cambrensis, who visited the spot fourteen years after.

The Abbey Kitchen is said to have been built by Richard Whiting, the last abbot of Glastonbury; but the architectural as well as written evidence is in favour of an earlier date. Pugin reckons its date between 1374—1420, the era of Abbot Chinnock.

* Murray's Somerset.

The Barn of Glaston Abbey, situated at the eastern end of the town, is one of the best examples of its class remaining. It is cruciform, the transept forming the entrances.

The George Inn, built by Abbot Schored, in the time of Edward IV., was originally an hospitium for the accommodation of pilgrims, the abbot paying all their expenses.

The Tribunal, a little beyond, is a building of the time of Henry VII.

The church of St. John the Baptist is conspicuous for its handsome and lofty tower, 140 feet high.

The Tor Hill (500 feet above the sea) should be ascended not only for a view of the remarkable landscape stretched far around it, but for the inspection of the beautiful tower that crowns its summit. This tower belonged to the pilgrimage chapel of St. Michael, and is all that remains of the structure, the rest having been destroyed by an earthquake in 1275. To this elevated spot, in 1539, Richard Whiting, the last abbot of Glastonbury, was dragged on a hurdle, and here hanged and quartered, for refusing to surrender the possessions of the abbey to Henry VIII. His head was set over the abbey gate.

Weary-all Hill is traditionally the place where Joseph of Arimathea, the legendary founder of Christianity in Britain, first rested with his companions, after his wearisome travel from the Holy Land. A stone, inscribed I. A., A.D. xxxi., indicates the spot where he planted his staff which blossomed into the prolific holy thorn.

Redland, 1½ miles north-east of Clifton, is included in the parish of Westbury-on-Trym. It formerly

belonged to the Abbot of Tewkesbury, who, in the year 1129, granted to one William of Kent, $2\frac{1}{2}$ acres of land in this place (Rubea terra) for a pound of wax, to be paid at the vigil of St. James, at the church of that name in Bristol.* Redland Court, the residence of G. O. Edwards, Esq., is a handsome mansion in the Italian style, erected by Mr. John Cossins, in 1730. The house is approached from Cotham by a magnificent avenue of elms, known as Lovers' Walk. The chapel and parsonage on Redland Green was also built by Mr. Cossins. The manor house (John Reynolds, Esq.) was built by Francis Gleed, Sheriff of Bristol, in 1660, who, in that year, proclaimed Charles II. On a carved fireplace is the date 1658.

Durdham Down is about 300 feet above the level of Bristol. It is a continuation of Clifton Down, jointly with which it comprises an area of 422 acres, the latter having a surface of 230 acres.

Cote House, at the entrance of the village of Westbury, two miles north-west of Bristol, is a handsome turretted mansion of the later part of the seventeenth century. It was purchased, in 1796, by the son of Josiah Wedgewood, of Etruria, whose retirement here was relieved by the enlightened conversation of not a few men of science and literature, who were then famous or acquiring fame. Coleridge, Southey, Humphrey Davy, and James Mackintosh, were here in the habit of meeting in intellectual combat, each of whom had his chief part in life yet to perform. Cote House is now the seat of G. O. Ames, Esq.

Stoke House, the mansion of W. H. Budgett, Esq., is about a quarter of a mile to the left of the last men-

* *Annales de Theokb.*, p. 74.

tioned. It was erected, in 1669, by Sir Robert Cann, a sturdy old Justice of the Peace, concerning whom some characteristic anecdotes are related in the lives of the Norths. On one occasion he so far forgot himself as to swear in the House of Commons, for which breach of etiquette he was committed to the Tower, where, "being a little too stiff to kneel" and ask pardon, "he remained till the parliament rose." There is a fallen cromlech near.

Westbury-on-Trym has a fine church of the thirteenth and fifteenth centuries.

Henbury Church, Court and Cottages are of marked picturesqueness.

Keynsham, five miles from Bristol, derives its name from St. Keyna, who, it is said, changed the numerous serpents, with which the place was infested, into stones; the abundant petrifications, more scientifically known as ammonites, being ever since concrete testimony to the miracle. Of the Abbey, that once existed here, some vestiges remain; its site was near the chancel end of the church. Within its precincts were interred the remains of the Princess Eleanor of Brittany, niece of King John, by whom she was confined, during 40 years, within the walls of Bristol Castle. Jasper, Earl of Pembroke, uncle of Henry VII., was also here buried.

The church has an Early English chancel, which is believed to have belonged to a structure appropriated to the adjoining abbey, in the year 1292. The carved oak pulpit bears the date 1634. On an altar tomb, within the communion rails, is the effigy in armour of Henry Bridges, Esq., who died in 1577. The tower was rebuilt in 1632, to replace one destroyed by a storm which ruined likewise the greater part of the body of

the church. The fabric has recently been restored with much taste at the cost of upwards of £3000.*

A skirmish occurred here between the Duke of Monmouth and the King's troops, with a loss of fourteen men to the former.

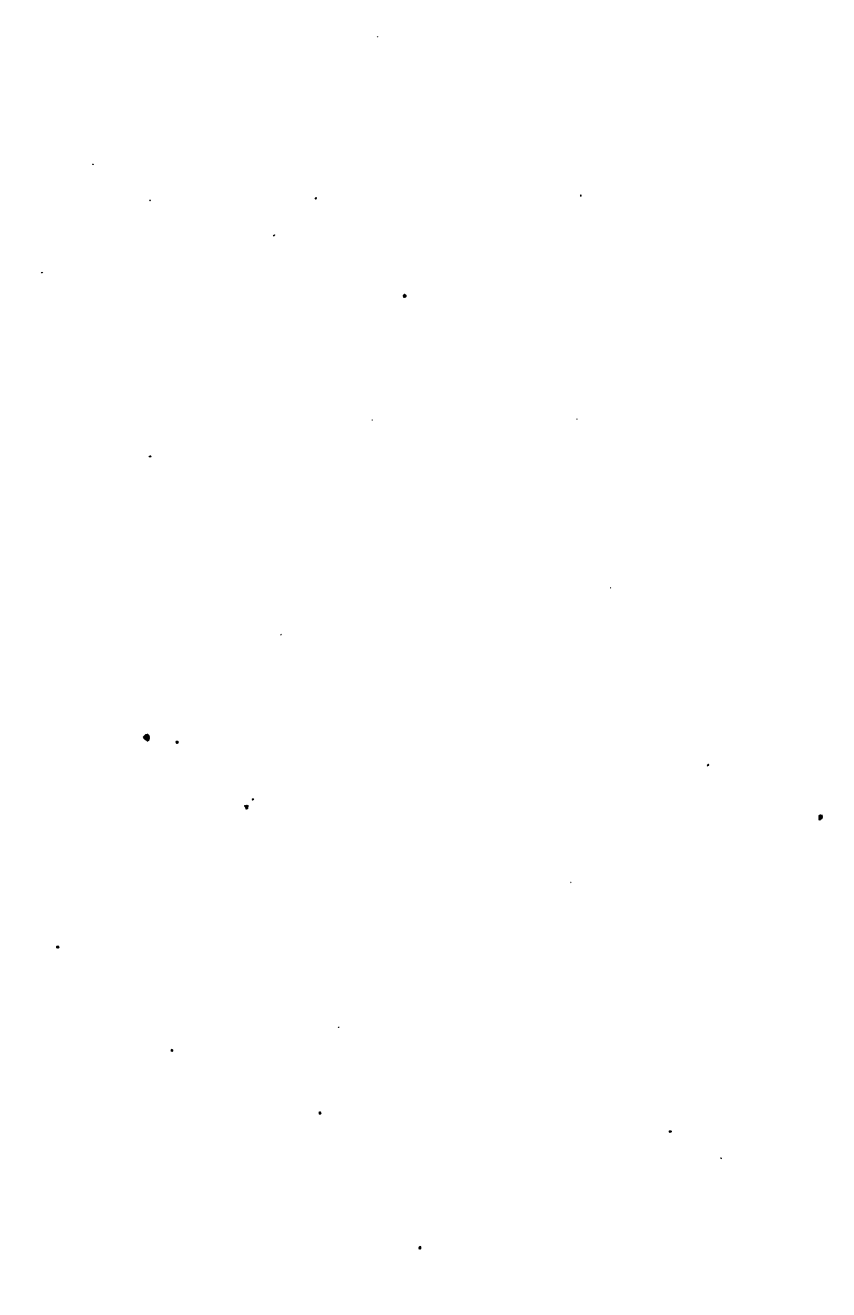
About $1\frac{1}{4}$ miles south-west of Keynsham is *Queen Charlton*, so called from having been part of the jointure of Queen Catherine Parr. In 1573, Queen Elizabeth passed through the place. The church is ancient, but small. A Norman gateway, once belonging to a house of the Abbot of Keynsham, stands near the manor house; and at the extremity of the village is a wayside cross.

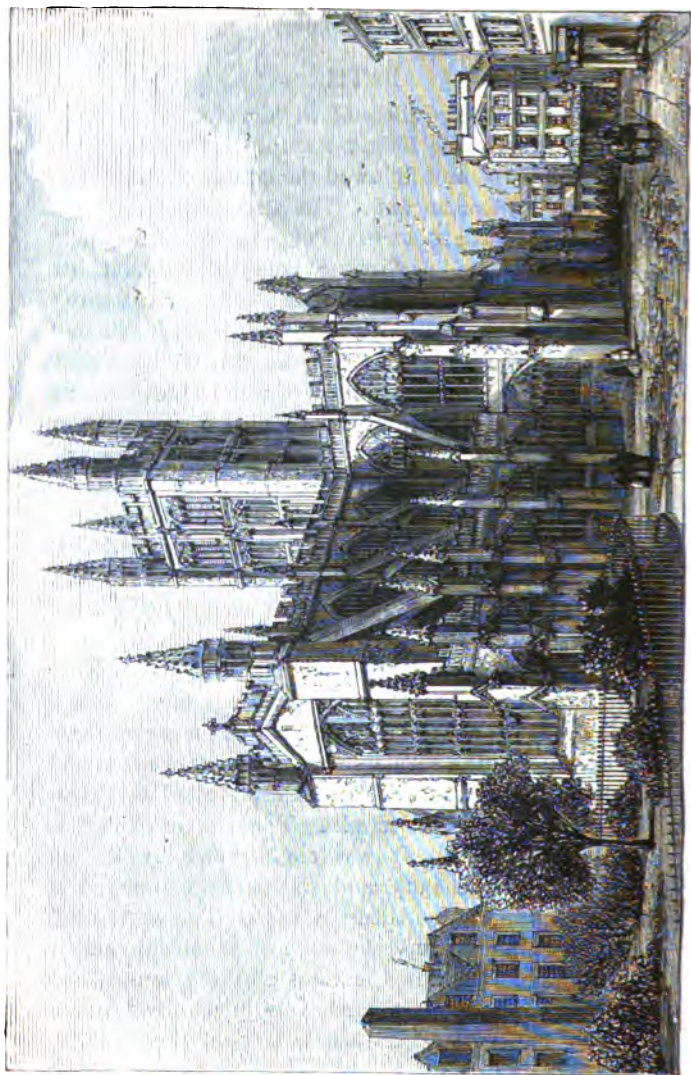
Publow, two miles south, in proximity to Pensford (whence a walk or drive may be continued to Stanton Drew, one mile distant) has a church with a handsome tower.

Adjoining Queen Charlton, on the road to Bristol, is *Whitchurch*, which possesses a cruciform church of "the transitional" style of the district, towards the end of the twelfth or the beginning of the thirteenth century. Only one of the windows, "a lancet of the very earliest type," belongs to the original building, but the tower is of the same date, and appears to have been untouched since its erection. The east and transept windows were inserted in the fourteenth century, and the south aisle was added the century after. Collinson, the historian of Somerset, was vicar of this church.

Near Whitchurch is *Maes Knole*, an old camp, supposed to be Roman. It commands an extensive view.

* Church Builder, vol. I., p. 11.





BATH ABBEY

BATH.

Bath is the *Aquæ Calidæ* of Ptolemy (A.D. 120). It lay just without the Belgic territory. The mediæval walls stood upon, and followed the course of, the foundations of the Roman wall. The area, within the circumvallation, was $22\frac{1}{2}$ acres. Pepys speaks of the walls being, in his time, perfect. Stukeley says that in his day (A.D. 1724) they were, for the most part, entire; but they are now utterly destroyed. The principal Roman buildings stood around the site of the Abbey churchyard. An ancient temple, of which some remains are in the Literary Institution, occupied the position of the present Pump Room. Just fronting this temple was a second temple. We cannot here give an account of the various discoveries of Roman altars, baths, tessellated pavements, columns and capitals, statuary, metallurgy, funereal stones and inscriptions, medallions, vases, &c., of all which numerous remains have been preserved and many descriptions given.*

The Abbey was originally a nunnery, founded by King Osric in 676. By Offa, it was converted, in 775, into a house for secular priests. In the strife between these and the monks, the seculars were of course worsted and expelled. A monastery was then established by Edgar for twenty Benedictine monks. The present church is late Perpendicular. It was commenced by Bishop King, who died in 1503, and was nearly completed at the dissolution of the Abbey in 1539. The west front, with the sculptured representation of Jacob's dream, is one of the most striking features of the exterior; and the tracery of the west window is in worthy keeping

* See Scarth's *Aquæ Solis*. Som. Arch. Proc., *passim*. Earle's Bath. Wright's Bath, &c.

with the grand design of the façade. The sculptured west door dates in 1617. This was the last ecclesiastical building of any importance, erected in this country, in the Perpendicular period of Gothic architecture. The Royal Literary Institution is of well-known interest for its geological specimens and local relics of the past, particularly Roman antiquities.

The appearance of Bath, built entirely of the light freestone or oolite of the district, its handsome rows and crescents rising stage upon stage against a background of green hills and woods, is that of one of the fairest of landscape cities. The environs are also of much attraction. Of places worthy a visit should be mentioned *Claverton* (3 miles, over Bathwick Hill), the rectory of Graves, the author of "The Spiritual Quixote." The church is a 15th century building. *Sham Castle* (1½ miles) needs no more than its name to repel a visit, except for the sake of the prospect from its site. It was built in 1760 by Ralph Allen. *Prior Park*, like twenty other seats, "commands a more beautiful and varied view than any other private residence in the kingdom." Ralph Allen (the Alworthy of Tom Jones), who built the mansion, ordered Wood, the architect, to spare no expense in showing what could be done with the Bath freestone, and a noble building in a noble situation is the result. It is now a Roman Catholic College. *South Stoke Church* (3 miles west) has a 15th century tower, and a doorway and font of Norman work. *Hinton Charterhouse* has a fine Elizabethan mansion, built out of the ruins of the abbey. The Abbey Chapel remains. *Norton St. Philip* has a fine church. Returning from this place to Hinton, we leave the latter by the ancient British trackway, called *Ridge-*

way, which conducts to Wellow, near which is *Stoney Lyttleton*, where there is a famous barrow.

Farley Hungerford has considerable remains of the castle, a separate guide to which, by Rev. Canon Jackson, can be obtained.

John Aubrey, the discoverer of Avebury, who had the honour of conducting Charles II. to view the monument, thinks that this "temple" as much exceeds Stonehenge as a cathedral does a parish church. The dispersion of the stones at Avebury gives Stonehenge, however, the advantage in a comparison, and the latter has a rude but impressive architectural character that the other wants. The church at Avebury is an ancient building, much modernized within, but retaining a Norman font, and an entrance arch ornamented with zigzag moulding.

Wilton House was built in 1648, from a design by Inigo Jones, but was Gothicized in the last century by the tasteless Wyatt. The general plan is a hollow square, with a glazed cloister enclosing the central space. The statuary and pictures are of notable importance, especially the Vandykes amongst the latter. The great interest, however, lies in its historical and family associations; particularly in its connection with Sir Philip Sidney's *Arcadia*, part of which was written at this spot at the request of his sister:—

Sidney's sister, Pembroke's mother,
Death, ere thou hast slain another,
Wise and fair and good as she,
Time shall throw a dart at thee.

The old church is a ruin. The new church, a costly experiment in the Lombard style, is, with its oriental exuberance of ornament, too metricious for our sombre

English climate and character. The carpet factory here is the oldest in England.

Bemerton Rectory, close at hand, will be visited for the sake of George Herbert; and its interest is not lessened by having had also among its vicars, Norris, the Platonist, and Coxe, the historian.

The apparent magnitude of Stonehenge, when seen at a distance, is no more than that of one of the occasional small groups of trees on the same wide rolling plain. But it is not so much its magnitude as its mystery that excites our interest. Whether it be a sepulchral trophy, or a religious altar, or a forum or court of justice, or an astronomical observatory, or a serpent temple that, like the tail of Minos, wound circle within circle, and was a sort of Inferno for holocausts of human victims, has been severally a speculation with ingenious and learned writers upon the subject. Also, it has been pronounced to be Pagan, Phœnician, Druidical, Roman, and Saxon, to belong to a period as early as the stone age to as late as the Danish invasion.

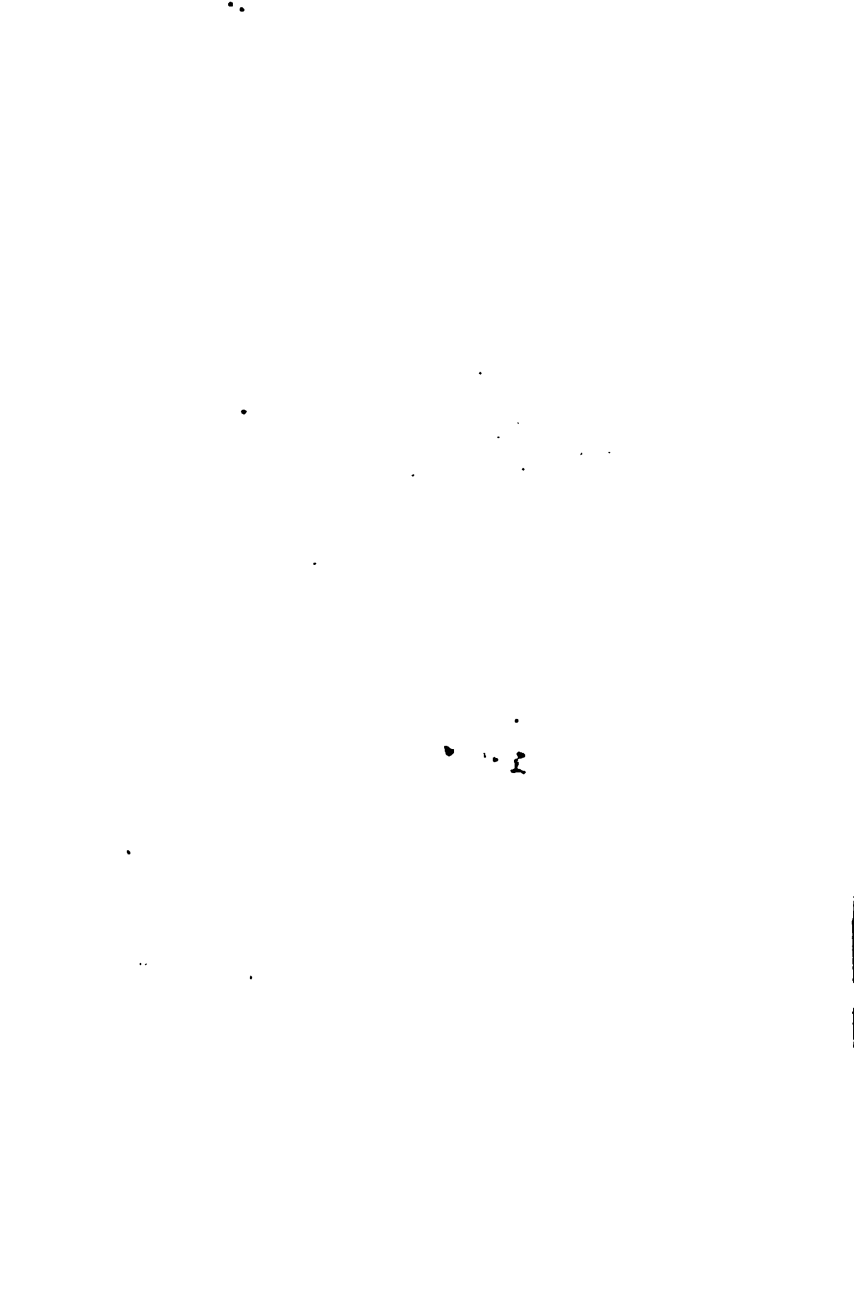
The outer circle consisted of 30 upright stones, connected by imposts, at a height of 16 feet above the ground. Of these, 16 uprights and 6 imposts are still in their original positions. Within was a smaller circle, and which enclosed the great ellipse. This was formed of five or seven trilithons, of which the loftiest was 25 feet. Within these were 19 granite posts, and the so-called altar stone. Of the great ellipse there are still two perfect trilithons and two single uprights, one, however, in a leaning position. The altar stone also remains. The numerous barrows or funeral mounds distributed around Stonehenge, have given support to

the theory that this ancient monument is a pre-Christian British temple, whose graveyard is Salisbury Plain.

The view of *Salisbury Cathedral*, from the Bishop's garden, is unrivalled of its kind. At this spot, the picturesque distribution of wood and water in the foreground, with the fretted walls and windows of the church beyond, and the sublime and beautiful spire are a combination that an Englishman may be proud of. This spire is 406 feet in height, the loftiest in England. Though added in the reign of Edward III., it harmonises perfectly with the rest of the building, which is Early English (1220—1258).







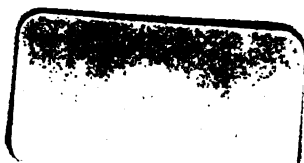
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